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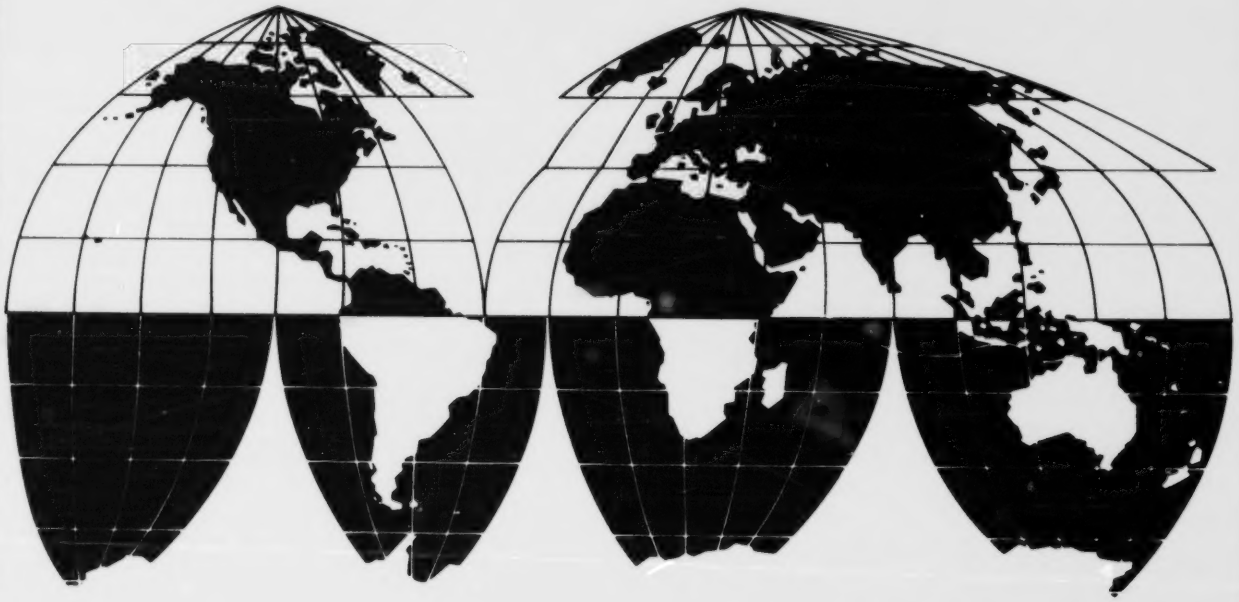

Eighth Northern Libraries Colloquy

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Edmonton and Whitehorse
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Editors: G.A.(Nita) Cooke and Garth Graham

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Preface

The organization of the 8th Northern Libraries Colloquy was jointly executed by the staffs of the Boreal Institute for Northern Studies in Edmonton and the Department of Information Resources of the Yukon Territorial Government in Whitehorse. These proceedings are also a joint effort.

All talks and discussions in Edmonton and Whitehorse were recorded on tape and later transcribed, this process being more difficult than anticipated, but assisted in many cases by the provision of typed copy of their talk by the participant. A copy of the transcription was sent to each participant for correction and entered on to the computer at the University of Alberta using a text-formatting program, thus providing camera-ready copy for printing. This 'participant editing' accounts for the varying styles and spelling, reflecting the internationality of the Colloquy.

The theme of the Edmonton session was the 'Southerner's needs for northern information'. The Whitehorse sessions focussed on the 'Norhtherner's needs for northern information'. Through these two perspectives it was the intention of the organizers to produce a slice in time status report on the problem of access to information on Canada's north. A reading of these proceedings shows that this is a volatile subject.

Accelerated exploration for energy resources in Canada's north and the aspirations of Native groups and northern governments for political autonomy have resulted in a proliferation of information services. But, largely as a consequence of the nature of northern economic development in Canada, access to northern information has, if anything, become more, not less, complicated. Repeatedly the Colloquy heard about competition among corporations for technical information and about confrontation among Native groups, public interest groups, corporations and governments over development issues. Many of these agencies restrict access to the library services they maintain to their own staff and clients, while at the same time there are signs of a decline in support for institutions which do allow public access. There is therefore a growing body of technical information which is not accessible to the public. Some northern based libraries which should be addressing this problem are being cut back. The consequences therefore for meaningful northern involvement in development issues are particularly unfortunate.

There has also been a growth in automated data bases in institutions serving northern information needs and a growth in the northern component of standard on-line data bases. But access to this is dependent on experience and special skills in the design of search strategies.

The picture of northern libraries in a political context is not new to the members of Northern Libraries Colloquy. What was different at this meeting was the degree of intensity. The report on the Bibliography of Northern Canada project by the Association of Canadian Universities for Northern Studies and its discussion provided gloomy prospects for easy solutions. On the other hand, it is clear that through planning and cooperation, Alaska has made substantial headway towards resolving very similar problems. In this, Alaska provides an example to which Canada might well make reference.

Dr. Geza Thuronyi, speaking on 'Cooperation in Bibliographic Services' (page 113), provided the best summary of the role of Northern Libraries Colloquy itself:

> At the first meeting, the principal objective of the Colloquy was stated to be exchange of information and ideas, and exploration of ways of communication among centers with northern interests, and among their users. Today, nine years later, this is still a valid objective. By bringing this group together at regular intervals, the Colloquy has enhanced awareness of developments in our field and stimulated individual and joint initiatives.
>
> There are many obstacles to effective cooperation: inertia, lack of funding, unwillingness to compromise on past practices, etc. Perhaps one of the most formidable obstacles, however, is lack of understanding and appreciation of each others' aims and aspirations. Because of our participation in Northern Libraries Colloquies, this is one obstacle we shall not have to face.

The principal organizers and editors would like to thank everyone for their cooperation and in particular Brenda Chawner, Dorothy Loowell and Robin Minion of the Boreal Institute for Northern Studies and Glenella Hill, Mary O'Byrne and Marina Pope in Whitehorse.

Garth Graham and G.A.(Nita) Cooke -- Editors

Southerner's needs for northern information

Edmonton, June 1-3, 1980

SPIRES - What is it?

Brenda Chawner, Boreal Institute for Northern Studies

Many of you may have heard of SPIRES already. SPIRES stands for the Stanford Public Information REtrieval System, a general purpose information storage and retrieval system developed at Stanford University in Palo Alto, California. By saying that it is a generalized computer information storage and retrieval system, I mean that it allows one to define a set of data, to identify it, break it down into small pieces, tell the computer the characteristics of each of these pieces, and then operate on it in different ways. It can be checked to make sure certain pieces are there; it can be printed in a variety of formats; it can be searched online using a set of very simple commands.

In your conference kit you should find three brochures describing SPIRES [1] [2] [3]; these are available from the University of Alberta Department of Computing Services.

The University of Alberta acquired SPIRES in 1976, and people have been using it here for approximately 3 1/2 years. The SPIRES Reference describes the main characteristics of SPIRES and lists some early projects here at the University of Alberta.

The SPIRES Access brochure is useful because it tells you how to access SPIRES as a remote user. It includes instructions for signing on to the University of Alberta's computer, and for using SPIRES. It also gives some information on the SPIRES mailbox, a feature which allows users to send information back and forth to one another. Page 3 lists the procedure for signing on via DATAPAC, the Canadian telecommunications network. What this sheet doesn't tell you is how you go about setting up an account with the University of Alberta. If you are interested in using any of the SPIRES databases that you will hear about this morning, give me your name or write to me and I will put you in contact with the appropriate people at Computing Services.

The SPIRES Reference for Data Library and Programlist is a guide to using two of the Computing Services produced SPIRES databases. Data Library and Programlist are SPIRES subfiles describing machine-readable information and programs and subroutines available at the University. It is included in your kits because it goes through the basic SPIRES commands for searching; I will now explain the main ones in a bit more detail.

To start using SPIRES after signing on the University of Alberta, you simply type in "$run *spires". Most SPIRES commands can be abbreviated to the first three characters. To choose a database you type in "select" followed by the name of the

---

[1] SPIRES Reference
[2] SPIRES Access
[3] SPIRES Reference to Data Library and Programlist

database; this is similar to the Lockheed "begin" command or the SDC "file" command.

Searching in SPIRES is fairly simple; it is not as sophisticated as Lockheed or Infomart/SDC. You simply say "find" and the name of the index you want to search (the indexes vary according to the database; most will have author, title, and subject/keyword), followed by the word you are looking for. The example given is "find au Richter, b.".

Searches can be modified using boolean logic - and, or, and not. "And" is used to narrow searches, "or" to broaden them, and "and not" to eliminate things. There is an "explain" command which is useful, and also a "help" command that can be used when things go wrong. SPIRES also has an online tutorial facility that will work you slowly through the system.

The command to print results is simply "type", as illustrated on page 3 of the SPIRES Reference to Data Library and Programlist.

There are many more sophisticated things you can do with SPIRES, but I have just described the basics - sign-on, search, and display results.

I should perhaps try to give you some idea of the cost of using SPIRES. There are charges for telecommunications and for the computing time used; these will usually be fairly low, since searching on SPIRES is very efficient. In addition, there may be a charge levied by the database producer, usually so much per hour. Of the databases you are going to hear about next, BOREAL and ASTIS do not have such an additional charge; AOSI, the Alberta Oil Sands Index, does. There are a number of SPIRES manuals that go into SPIRES use in much more detail; like the handouts, they are available from the Department of Computing Services.

Q. Is SPIRES available outside Canada?
A. Yes. It was developed in California, and is therefore available at Stanford, and at a number of other American universities.

Q. What about the databases you have here?
A. You have to access them through the University of Alberta computer, by dialling in through DATAPAC, TYMNET, or TELENET.

The Arctic Science and Technology Information System

C.R. Goodwin, Arctic Institute of North America

Abstract

ASTIS is now a completely developed information retrieval system, with a sizable database of arctic information, and the products and services necessary to effectively communicate that information to customers. The ASTIS database is available for public online searching, both from ASTIS' own version of the database and, by September 1980, from QL Systems Ltd. Printed ASTIS products include a bi-monthly current awareness bulletin, an annual cumulative bibliography, special bibliographies, and reference manuals for ASTIS users. A reference service provides answers to telephoned or mailed inquiries through online searches of the ASTIS database and other databases.

When I first described the Arctic Science and Technology Information System to the Colloquy in Paris almost two years ago, ASTIS had just begun operations. Since that time the system has fulfilled its early promise, and has developed into a mature and useful arctic information system. In the sections which follow I will outline in point form some of the major events in the development of ASTIS, describe the system's current products and services, and discuss our plans for the immediate future.

Project History

Funding for the ASTIS project was provided in September 1977 by eight member companies of the Arctic Petroleum Operators' Association, a group of oil companies working in the Canadian Arctic. The original version of the ASTIS database was designed to be both an information retrieval system and the cataloguing system for the Arctic Institute of North America (AINA) Library. During the design and implementation phase of the project, from October 1977 to April 1978, the following tasks were accomplished:

- a computer terminal was purchased
- the SPIRES database management system at the University of Alberta was chosen for the implementation of the ASTIS database
- detailed specifications for the design of the database were written
- an indexer and a data entry operator were hired
- the AINA Library subject headings were prepared for use in ASTIS by being put into machine readable form and by

enhancement of cross-references

- programming of the basic database was completed

- coding sheets were designed, and the ASTIS Indexer's Manual was written.

The ASTIS system began operations on May 1, 1978, when all AINA Library cataloguing procedures were switched to ASTIS. During the first year of actual operations the following major projects were completed:

- output programs were written for proofreading of documents and indexes, and for online searching of the database

- programs were written to produce the bimonthly ASTIS Current Awareness Bulletin, and the first issue was published (twelve issues have been produced as of May 1980).

- computer production of library book labels was started

- programs were developed to automatically generate cross-references in the ASTIS subject and geographic indexes, and listings of the subject and geographic headings were produced for use by online searchers

- the database was made publicly available for online searching under the auspices of the Alberta Information Retrieval Association, and with financial support from the Alberta Research Council, which began paying ASTIS' disk storage charges on January 1, 1979.

- workshops were held to instruct librarians in the online use of ASTIS

- the first printed AINA Library catalogue was produced, which replaced the card catalogue as the Library patrons' access tool to all new cataloguing

- an information exchange agreement was set up with the Maritime Research Information Service in Washington, D.C.

As part of the Arctic Institute's merger with the University of Calgary on April 1, 1979, the AINA Library became part of the University Library. At the end of June, 1979, the University Library decided that it did not have the financial resources to maintain a separate cataloguing system for the AINA Library, and that all new material would be catalogued through the University's cataloguing system. Because ASTIS had been sharing selection and indexing costs with the AINA Library this decision made it necessary for ASTIS to hire a second indexer. The fact that ASTIS was no longer a library cataloguing system had some

beneficial effects however, since some streamlining of ASTIS procedures and of the database itself was possible. It was no longer necessary to produce printed catalogues and book labels, some data elements, such as call-number, could be dropped from the database, and more freedom was available to change indexing standards. During the second year of ASTIS operations, from May 1, 1979 to the present, the following major tasks were completed:

- corporate author cross references were added to the database
- a final printed catalogue for the AINA Library was produced
- several major changes to the subject headings were made to shorten some of the more lengthy headings, and to switch from library-type cross references (s, sa, x, xx) to thesaurus cross-references (u, uf, nt, bt, rt)
- the database was re-designed and rebuilt to eliminate data elements which were no longer needed, and to make several other desirable changes
- a new ASTIS Indexer's Manual was produced to reflect the above changes
- programs were written to allow the automatic production of fully-indexed special bibliographies from the database
- these programs were used to produce the APOA Bibliography, containing all 218 APOA documents in the database as of January 9, 1980
- increased emphasis was placed on indexing reports from APOA companies and other libraries in Calgary. So far, six companies have given ASTIS permission to index their reports. In addition we index material at the Northern Pipeline Agency and the Institute for Sedimentary and Petroleum Geology
- the format of the ASTIS Current Awareness Bulletin was revised to allow easier indexing, an author index was added, and a new printing method allowed better printing quality
- during an experimental 6-month period a large number of journals in the sciences and social sciences were scanned to identify those which contained a significant amount of arctic material
- the first annual cumulative ASTIS Bibliography was produced
- ASTIS opened accounts with several online retrieval systems, and began developing the staff expertise necessary to search a large number of different databases effectively. This expertise will be offered to ASTIS' customers as part of a comprehensive reference service

- an ASTIS Online User's Manual was produced, containing an explanation of how to search the database, plus subject, geographic, and author heading listings

- additional workshops were conducted to familiarize local librarians with the online use of ASTIS

- agreement was reached with QL Systems Ltd. to make the ASTIS database available throughout North America on their retrieval system, for which ASTIS receives a royalty based on the amount of use of the database. Both QL and the National Research Council's CAN/OLE system were interested in acquiring the ASTIS database, and the final choice was a difficult one since each system had several points to recommend it.

Summary of Current Products and Services

1. ASTIS Online Database

The ASTIS database currently contains about 4200 documents. The database is available for public online searching through the SPIRES information retrieval system at the University of Alberta. SPIRES is easy to use and extremely inexpensive. ASTIS provides documentation (the ASTIS Online User's Manual) and instruction for those interested in searching the database. Use of the SPIRES version of ASTIS has been generally restricted to users within Alberta, since ASTIS does not have the staff that would be required to support a large number of online customers.

In order to make the database more widely available, ASTIS has recently licensed it to QL Systems Ltd. which makes over 40 databases available to 400 customers in Canada and the U.S. The ASTIS database will be available on QL by September 1980.

2. ASTIS Bibliography

The ASTIS Bibliography is produced annually on microfiche and contains the entire contents of the ASTIS database. Detailed subject, geographic, author, and title indexes are provided. Each edition of the ASTIS Bibliography is fully cumulative. That is, each edition contains the abstracts and index entries from all previous editions, as well as from all previous issues of the ASTIS Current Awareness Bulletin. This eliminates the need to look in more than one volume when doing a retrospective search. The microfiche which make up the ASTIS Bibliography are contained in a re-usable three-ring binder along with a printed introduction which describes the content and format of the Bibliography.

The 1979 edition of the ASTIS Bibliography contains over 3000 pages of information on 18 microfiche, and sells for $50.00.

3. ASTIS Current Awareness Bulletin

The bi-monthly ASTIS Current Awareness Bulletin is designed to keep subscribers aware of new arctic publications. Each issue is approximately 60 pages long, and contains about 330 citations with abstracts. Citations are arranged by subject, and geographic and author indexes are provided. An annual subscription for calendar year 1980 is $45.00, and for 1981 will be $50.00.

4. APOA Bibliography

APOA Bibliography contains all 218 APOA or APOA-funded research reports in the ASTIS database as of January 9, 1980. Abstracts are provided for all documents. The APOA Bibliography is 74 pages long and includes title, author, subject, and geographic indexes. Price is $10.00, and distribution is being handled by both ASTIS and the APOA Information Service. Updated editions of this bibliography will be produced as more APOA reports are released. A secondary purpose in producing the APOA Bibliography has been to demonstrate the capabilities of the ASTIS database for the production of specialized bibliographies. The results of any ASTIS online search can be used to generate a fully indexed bibliography in camera-ready form. ASTIS hopes to publish other special bibliographies in the future.

5. ASTIS Reference Service

The ASTIS project now has the capability to search many different databases on four different online retrieval systems. This expertise is being offered to ASTIS customers through a reference service which will answer telephoned or mailed requests for literature searches on northern topics by performing online searches of the ASTIS database as well as other relevent databases. This service will be especially useful to clients which do not have library staff that is familiar with online searching. Customers will be billed for the online search costs plus $25.00 per hour for ASTIS staff time.

Future Developments

The ASTIS objectives for 1980-81 are:

- to continue to enlarge the ASTIS database. It is hoped that with the completion of several special projects in the summer of 1980 a moderate increase in the rate of indexing from the current 2000 documents per year will be possible.

- to undertake an advertising campaign to increase the sales of ASTIS products. We would like to increase the number of Bulletin subscriptions to 200 from the present 130, and to

sell almost that many copies of the ASTIS Bibliography.

- to produce the short publication ASTIS Selection Policy. This document, which is being compiled at the present time, will contain ASTIS' rules for selecting documents for the database, as well as a list of the journals and series which the project scans. It is important that ASTIS users have a clear idea of what is, and is not, included in the database, and this document will provide that information. The ASTIS Selection Policy will be mailed automatically and free of charge to users of all ASTIS products and services.

- to continue to broaden the number of sources from which ASTIS receives information. One of ASTIS' strengths is its ability to index non-confidential internal reports of resource companies operating in the Canadian arctic. We currently have access to the reports of 6 companies, and hope to increase that number to 10 during the next year.

- to continue to enhance the approximately 3500 headings in the ASTIS subject thesaurus. We have so far gone through the subject headings twice to correct headings and to add and correct cross-references and scope notes. The first of these times was when the AINA Library subject headings were initially prepared for use in ASTIS, and the second time was when we switched to a thesaurus format at the end of 1979. Although most major problems and inconsistencies have now been corrected we would still like to put some additional work into the thesaurus, and will review it systematically once more during 1980.

- to continue to work towards the creation of a cooperative Canadian northern information system. ASTIS has been one of the participants in the planning stages of the Bibliography of Northern Canada (BNC), currently being proposed by the Association of Canadian Universities for Northern Studies. We hope that the next year will see major progress on BNC.

We look forward to another year which will be as busy and interesting as the past two years have been.

Q. How many items per year are you adding to the database?
A. Up until now it is been 2000 per year.

Q. Can you give us any general idea what your coverage is?
A. In terms of time we don't generally index anything more than 3 years old, unless it is just been publicly released and wasn't available before. Geographically we take all that we can about the Canadian Arctic and Alaska, although we certainly are not covering all the Alaskan literature as we do not have access to it all and there is more than we could handle anyway. Some Greenlandic, Scandinavian and Russian material but not really a large percentage of our total database. In terms of subject:

anything at all to do with the Arctic. We do do some alpine material and a little bit of Antarctic material, usually only if it is applicable in the Arctic, e.g. logistics, glaciology, things that have a wide application; but material on specific geographic features in the Antarctic, for instance, are not included.

Q. Would you describe the non-confidential documents you index from the oil companies?
A. The majority are environmental impact statements, some social and economic impact things as well. We do not get into petroleum production type of documents. We are only interested in things of interest to people outside the petroleum industry as well.

Q. Do you anticipate doing any retrospective indexing?
A. I doubt if we will do any retrospective; there is too much new material. We hope to increase the 2000 items per year, not drastically though - 3000 is probably the most we could hope to do.

Q. How much staff do you have?
A. We have two people indexing, Judy Flax and Hugh McNaught, plus one data entry operator.

Q. What about the availability of documents you index from a company?
A. We try to ease the access to them. When we first start indexing at a company they have three choices - if the library is big enough and has enough staff to handle interlibrary loans, and if they are willing to do that for outside users, then we list their interlibrary loan code in the database. On the other hand, some companies don't have the set up to do ILL's, but are willing to donate second copies of the reports to the AINA Library. This is the option that we prefer as easiest for everybody concerned. In that case, we list documents using the University of Calgary library code. There are a few companies who don't want to do either of these: and although the documents are sort of publicly available and are not confidential, they don't have the staff to do interlibrary loans at their library and they don't have spare copies to donate to the AINA library. In that case the document is listed in our products without a location code. So far not many have been listed this way, but when that does happen then somebody trying to get hold of the document will have to write to whoever is listed as the publisher, viz. to the consultant who did the report. We do not list anything unless it is public.

Q. What relationship do you have with the AINA library?
A. We are a separate organization, but we examine all material coming into the library.

Q. You rely on the collection basically for the bibliography?
A. Yes.

Q. Are any of these documents being put onto COM to facilitate

their use?
A. No. Many of the documents listed in the APOA Bibliography are available on fiche from APOA. Otherwise you have to interlibrary loan a document.

Q. You mentioned a reference service. What are you charging for that?
A. We will charge the search costs plus $25 per hour staff for our time.

Q. Is this reference service an independent activity or part of the Library?
A. It is part of ASTIS, not part of the Library.

Q. What is the cost of the bibliographies?
A. The cumulative ASTIS Bibliography is $50. Subscriptions to the Bulletin are $45 this year, and $50 in 1981. The APOA Bibliography is $10, and the Online User's Manual is free to people who are doing online searching of our SPIRES database.

Q. Do those charges cover your costs?
A. It depends what costs you mean. They cover the cost of producing the products, but not the cost of assembling the information. In our next fiscal year, which starts in November, we'll hopefully be getting about 20% of the total cost of the project from the sale of the products, but that is assuming that our advertising campaign has some success. Right now we are only recovering 10 - 12% of our costs from the sale of products.

Q. Are you funded by APOA?
A. Yes. The Arctic Institute gives us a lot of in kind support. The Alberta Research Council is paying our disk storage charges on SPIRES, which they do for several other databases that are available through SPIRES. We hope that these two things (support from AINA and ARC) plus the sale of products will add up to 36% of our budget. Thus the other 64% will be funded by the APOA. We are trying to reduce our dependence on that single source of funding, but it could be a long time before we can say that the project is self-sufficient. I don't think that a service like this can operate just from the sale of products, as people would not buy the products if we were to charge what they really cost.

The Alberta Oil Sands Information Centre and its Relevance to Oil Sands and Heavy Oil Technology

Helga Radvanyi, Aberta Oil Sands Information Centre

With the rapid advancement in science, instant and easy access to information becomes more and more important. International network linking is necessary to support development of natural resources and avoid duplication of research.

The Alberta Oil Sands Technology and Research Authority (AOSTRA) has taken a major step in this direction by signing international research exchange agreements with the equivalent agencies in the United States of America, Venezuela and Malagasy. It is also assisting in creating an international information centre in conjunction with the United Nations Institute for Training and Research (UNITAR). AOSTRA was created by the Government of Alberta in 1974 to develop new technology for Alberta's huge oil sands resources. To facilitate information access, AOSTRA funded the Alberta Oil Sands Information Centre in 1975. The Centre is operated under contract by the Alberta Oil Sands Research Department of the Alberta Research Council. Its main activity prior to this expansion was the preparation of the Alberta Oil Sands Index for a number of subscribers. This subscription service has been expanded and continues to be a major activity of the Centre. The subscription rates are described in Appendix 1.

The primary objective of the Oil Sands Information Centre to date has been the collection and dissemination of information on Alberta oil sands. The Alberta Oil Sands Index consists of a published cumulative edition, updated quarterly, and an online computer searchable database. The index consists of almost 6,000 documents and grows by about 1,000 a year. The online Index is updated bi-weekly and contains all the information of the printed Index. Users with computer terminals can scale searches to individual needs, as well as having more rapid access to most recent publications. The Oil Sands Information Centre will perform customized searches for organizations or individuals without access to a computer terminal.

A bi-weekly "current awareness" service in the form of the most recent additions to the Index is intended to bridge the gap between quarterly printed updates.

All indexed documents are on file at the Centre and most can be photocopied, if desired.

A file of active oil sands researchers and research projects is maintained by the Centre. Like the Index, the file is available in both printed and computer online searchable forms. One copy of the printed version will be given free to all participants.

The publication of a newsletter called the TAR (Technology And Research) Paper is another service of the Centre. Issued several times per year, the TAR Paper is designed to facilitate communication among members of the oil sands community, particularly those involved in research and development. The TAR Paper is available free upon request.

The Oil Sands Information Centre also acts as a referral centre for oil sands research. If the Centre cannot provide the information requested, the individual is directed to the appropriate person, department, organization, etc.

Information on oil sands is provided to all interested groups. This includes meeting with individuals, giving lectures to groups and schools, setting up displays at conferences and preparing audio-visual materials.

Queries from the general public are welcome provided that they are infrequent and of a limited nature.

With AOSTRA'S expanded mandate into heavy oil and enhanced recovery, the Oil Sands Information Centre is broadening its activities into these fields. In addition, the Centre is planning to accumulate physical properties and other numerical data and make it available as an online computer-searchable database.

After five years of experience, the Centre can now provide consulting and advisory functions in the provision of systems for information storage, retrieval and national and international network linking. We are prepared to assist anyone with the above, as well as continuing with our first objective -- the collection and dissemination of technical information on oil sands.

Q. Have you any idea how much you have on the database that may not be available elsewhere?
A. I compare ours with API, because we feel this is the main one. The last time we checked, 70% of our stuff was not in there. Some of their stuff isn't in ours because they put in all the newsy articles which we do not. We feel the item has to be of some lasting value. We will index a one page article out of OILWEEK which specifies things that the new Alsands plant will have because that is the first one, but we do not enter say 15 others which are identical. So the newsy type article - we will have less then the other databases. Our emphasis is on technical information, though for schools we also include some general articles.

Q. As you know, the Alberta Department of the Environment has published an oilsands socio-economic bibliography. Are you gradually absorbing that?
A. No. What they have, we have. We have had discussions and it appears they will continue publication. But we definitely overlap. When the index was first started it was much more technical, but we now try to include the social and economic

impacts. Eventually it may be that we absorb that bibliography.

APPENDIX 1

Detailed Description of Services Available from the Centre

The printed Oil Sands Index is available on an annual subscription basis. The price varies according to size and type of organization:

Group 1 (more than 100 employees) $500/yr
$100 each additional set*

Group 2 (25-100 employees) $400/yr.
$90 each additional set*

Group 3 (less than 25 employees or non-profit organization) $275/yr.
$79 each additional set*

The subscription year is January to December and includes the latest cumulative edition plus quarterly updates. Should the subscription be received after October 1st, it is automatically continued throughout the following year.

The Index consists of four volumes:

I. Author Index:

II. Corporate Author Index, Patent Country Index, Publication Source Index:

- Each entry includes title, author(s), corporate author(s) publication source, date and number of pages in the article.

III. Subject Index:

- Each entry consists of a document number, together with category codes and weights. The category code indicates the keyword emphasis in one or more of 14 subject areas. The weight describes the level of subject coverage.

IV. Numerical Title Listing:

- Each entry includes the complete title and reference, as

in Volumes I and II, together with category codes indicating the subject emphasis of the document.

* Extra copies are intended for circulation within the organization of the applicant. Each organization supported by a separate budget will be expected to take out its own subscription (e.g., parent companies, subsidiary companies, institutions affiliated with universities, university departments, government departments, boards and commissions, etc.).

BOREAL - the Automated Library Catalogue of the Boreal Institute for Northern Studies

Brenda Chawner, Boreal Institute for Northern Studies

In late 1976, the Boreal Institute for Northern Studies began investigating means of automating their production of catalogue cards. The Library was then using a traditional manual system of producing catalogue cards, which consisted of typing up a master, having the required number of cards photocopied, typing the added entries and tracings onto the cards, sorting them, and then filing them. Needless to say, such a system required a great deal of time and duplication of effort. It seemed as if we were constantly proofreading and retyping cards.

At this time, the University of Alberta's Department of Computing Services acquired SPIRES (Stanford Public Information REtrieval System), a general-purpose database management system that I have already described. Mrs. Cooke, the Institute's Head Librarian, decided to find out if SPIRES could be used to produce catalogue cards, since it would be considerably more convenient to have the cards printed locally.

Two consultants from Computing Services designed a system to meet the Library's needs. At that time, the main emphasis was on the printed product; little consideration was given to the development of a searchable database. A consequence of this is that the present version of BOREAL prints cards very well, but is not as easy to search as it might be. I hope to change this in the near future by redefining the file.

The data entered into the database consists of fairly standard cataloguing information. The data elements include:

- an unique key assigned by SPIRES that identifies each individual record
- a number indicating the data-type, which is used to format the card. By this I mean whether the record is for a monograph entered under author, a monograph entered under title, a series open-entry entered under title, a periodical analytic, a monograph analytic, etc.
- the item's order-number
- the date of publication
- the item's full title, including subtitles, translated title, etc.
- the call number, which in most cases is a UDC (Universal Decimal Classification) number, based on the Scott Polar's Universal Decimal Classification for Use in Polar Libraries

- tracings assigned by the library, which are also UDC numbers, since the library maintains a classified catalogue
- imprint
- collation
- a short descriptive annotation, which helps the user determine what the item is about. I feel this is an extremely important part of our cataloguing records, since, for the average user, UDC numbers are not particularly meaningful, and the annotation gives a bit more information about the item's subject.
- ISBN
- LC-card-number
- ISSN
- Title. This is a short title used as a title-added-entry if the full-title is very long
- Edition statement
- Contents-note

Data is entered using tags which identify each piece of information; it is then formatted to our specifications and a complete set of cards is produced, with the headings printed in the proper place. This saves a great deal of time, and has speeded up the number of items catalogued and lessened the time for a full set of cards to be filed in the catalogue.

Indexes presently available for searching include:

- Title - individual words from the title elements
- Tracings - UDC numbers. This index is very useful to searchers who are familiar with UDC; it is more difficult for users who do not have access to a copy of the schedules. One of my future plans is to set up a separate database giving the meaning of each UDC number. This should make it easier for other people to search the cataloguing database
- ISBN
- LC-card-number
- ISSN - these indexes are useful for known item searches, when one of the standard numbers is known
- Author

- Accession number
- Date
- Annotation - Individual words from the annotation. This is one of the most frequently used indexes, since it provides keyword access to the database. It does, however, have all the problems of natural language indexes, in that synonyms, singulars and plurals, etc. are not controlled, and to do a comprehensive search it is necessary to search for all possible words.

Another of my plans is to combine the title and annotation indexes into a general keyword index, which should facilitate searching.

The database includes cataloguing information for all items catalogued by the library since the beginning of 1977, as well as analytics received from the Scott Polar Institute in Cambridge. At present, there are approximately 6,800 items in the database, with some 350 - 400 added each month. We try to keep a balance between original cataloguing and analytics. I would just like to mention that we include all items catalogued since 1977, no matter when it was published. Therefore the database includes records for older books if we have received them recently. In fact, we have just recatalogued the "expeditions" section of the collection; many of these books were published around the turn of the century.

We can produce a number of different products from the database. We are presently printing all our catalogue cards, and also produce our monthly Library Bulletin from it. The Bulletin is arranged by geographic region, then subarranged by author and title. It is presently available free for the asking; I will be glad to have names added to the mailing list if you would like to receive it. As noted on the verso of the cover, all items, except those whose call number is Ref or University Library are available on interlibrary loan. Analytics for journals and books available in the main University of Alberta library are entered to provide our users with information about relevant material available elsewhere on campus.

We can also easily produce specialized lists from the database. In your kit, you will find a list of northern fiction printed from BOREAL; it includes some 102 items that have been added to the collection in the last three years. The items on it were identified using the call number, so what you have is essentially a shelf list of the fiction section.

I have also prepared a list of northern theses held in the Institute's library; two copies, in slightly different formats, are part of the Boreal's display up at the top of the room. One of the lists is in what I call the default format, which is

basically a catalogue card; the other was prepared using a feature of SPIRES called "Define table". The second format has much less information; each entry takes up only one line, and includes the author, title, publication date, and call number. Its main advantage is that it takes up much less room. The short format list is only some 20 pages long, compared with 69 for the full list. The list includes 295 theses; I would like to point out that the library has an extensive collection of northern theses, some in hard copy, some in microform.

I will be glad to search BOREAL for you if you do not have access to the University of Alberta's computing system.

Finally, a few comments on subject coverage. We cover much the same regions as ASTIS. Major emphasis is on northern Canada and northern Alberta, with particular emphasis on the western Arctic. We aim for comprehensive coverage of the Yukon and western Northwest Territories. Material on Alaska and other circumpolar countries is included; we have exchange agreements with a number of other northern institutes and research centres; this gives us a good collection of their reports and publications. Some Antarctic and alpine material is included as well. We have an agreement with the Scott Polar Research Institute to do complete analytics for five Canadian periodicals on a priority basis. They are: North, Arctic, Canadian Geographic, Muskox, and Arctic in Colour. Analytics for these are done as soon as each issue is received, and they are added to the database immediately.

Future plans, as I have already mentioned, include a major restructuring of the database to make it more easily searchable, and the development of a database of the UDC codes and their associated subjects. We have also been discussing the publication of a "Boreal Library Catalogue 1977 - 1979" as part of the Institute's Occasional Publications series. This would probably be on microfiche. I would also like to write a user's manual for the system, to make it easier for others to search the database.

If you have any further questions or comments, please feel free to contact me at the Institute.

Q: Do you have any plans to close the card catalogue?
A: No. We do not have the facilities to provide a number of terminals or fiche readers that would be required to move to either a COM catalogue or an online one. A number of patrons can presently use the card catalogue at one time, and we do not find filing a problem.

The Information Nord Quebec Network: a cooperative northern information service

Carol Bekar, Northern Studies Library, McGill University

Information Nord Quebec (INQ) is a cooperative network whose members are: The Centre for Northern Studies and Research, McGill University; The Centre de recherche du Moyen-Nord, Université du Québec à Chicoutimi; The Centre d'ingénierie nordique, Ecole Polytechnique à Montréal; The Centre d'études nordiques, Université Laval.

Early in 1978, representatives of the four northern research centres in Quebec universities, with support and encouragement from the FCAC program (le programme de formation de chercheurs et d'action concertée) of Québec's Ministry of Education, formed a Northern Documentation Committee to discuss common problems and to coordinate their services.

In 1978 the Northern Documentation Committee met several times, and the participants exchanged information about the scope and content of their respective collections, the systems used to process their documents, the services offered by each centre, and the possible means of cooperation among the participants.

Content of the Various Collections

The Service du documentation of the Centre de recherche du Moyen-Nord holds some 2000 documents, most of them unpublished, related to the middle north of Quebec (between 49 degrees and 58 degrees N). The Centre's staff locates and acquires such material wherever it may be found. It also identifies and describes documents and groups of documents that are privately held, as well as confidential information in the files of businesses or of other institutions that may at a later time become available for use in research. The service does not systematically collect published material related to its region, but does seek out and obtain rare or obscure publications. Theses are also collected. Materials collected by the service are indexed by a keyword list which they have established, and are entered into the Université du Québec's BADADUQ system, an online information storage and retrieval system used to catalogue and access the holding of the libraries of the Université du Québec. Thus their document records are processed in machine-readable form.

The Centre d'études nordiques (Laval) has a small documentation service. This Centre's staff and students rely principally on the Université Laval's excellent main library for their bibliographic needs, and the small collection of journals, monographs, and reprints held by the Centre itself reflects the past and present interests of researchers associated with the Centre. At present, staff of the Centre d'études nordiques are planning to reorganize the collection according to

recommendations contained in a report prepared by a consultant. This report suggests the outline of a selection policy, the mode of participation in the Centre's research activities by the documentation centre, and the introduction of the Universal Decimal Classification system for subject indexing currently acquired documents. This Centre has not yet processed any of its documentation in machine-readable form.

The library of the Centre d'ingénierie nordique, Ecole Polytechnique, contains some 6000 items entirely devoted to aspects of northern engineering. Authors, titles and bibliographic details of conference proceedings and chapters in books which the Centre receives are typed into a computer database via a terminal. Professional publications in the extensive personal libraries of the researchers associated with the Centre are processed in the same fashion. The information is then sorted by means of KWIC (Key-Word-In-Context) programs to provide printed catalogues accessible by author and words in titles. They do not collect monographs on any large scale, but concentrate on the acquisition of conference proceedings in their subject area.

The Centre for Northern Studies and Research, McGill University, was established in 1973. It possessed a small library related to its research needs and relied on the library of the Arctic Institute of North America for extensive coverage of the northern literature. When, in 1976, the Arctic Institute moved its headquarters and library from the McGill campus to the University of Calgary, McGill's Faculty of Graduate Studies and Research decided to support an expansion of the collection housed in the Centre for Northern Studies and Research. The Arctic Institute left behind for the Centre's use a collection of its duplicates, which included some monographs, broken runs of many journals, and a large number of articles and reprints. Acquisition funds were secured from McGill and from outside businesses, and since 1976 the collection has been rapidly expanded. In 1979 the collection was accepted as a branch library in the McGill library system and officially named the Northern Studies Library (NSL). As a participant in the network, NSL functions as the library committed to the acquisition of northern literature in all disciplines and formats. The other three participants constitute documentation centres with more narrowly defined selection policies. NSL's collection policy permits the acquisition of all types of printed materials; books, government documents, journals, reprints, pamphlets, sound and tape recordings, etc. Documents are acquired in all subject disciplines treating the north. Regional collection priorities include a comprehensive effort for the Quebec-Labrador peninsula, intensive collection for the Canadian north and Alaska, key documents on Scandinavia and Greenland, Siberia and the south polar regions. Because the library concentrates its resources on acquiring printed materials, the Centre for Northern Studies and Research continues to build a collection of polar maps, slides, and photographs, which are not yet catalogued. NSL's collection

consists of some 23,000 items, classified by the Universal Decimal Classification as revised by the Scott Polar Research Institute. The bibliographic records include brief descriptive annotations for most entries. Since January 1979 the library has been processing its documents in machine-readable form.[4]

Establishment of INQ

In its early meetings the participants in the Northern Documentation Committee recognized some common goals which included: rationalization of collection policies to avoid duplication of expensive or difficult to get material; improvement of reference services in each centre through knowledge of and shared access to participants' collections; dissemination of information about on-going research, funding, job opportunities, and fieldwork.

The Committee discussed these issues and decided that cooperation was desirable and would contribute to improved services in each institute. There was a broad agreement among the participating institutions that there is, in Quebec, a need for a systematic analysis and organization of the literature that is concerned with the north and with cold regions in general, and particularly the literature of the Quebec-Labrador peninsula.

An important factor recognized at our meetings is the value of northern information in a highly politicized context. It is apparent that in an atmosphere of confrontation information attains an importance and a value that may not be inherent in the documentation itself. In Quebec, the Native organizations, Hydro-Quebec, the Société de developpement de la Baie-James, and the Société d'énergie de la Baie James are the producers or owners of much of the current report literature relative to northern Quebec. The settlement of Native land claims and the need to accomodate the development of hydroelectric power have brought these groups into direct conflict. In other parts of the Canadian north the problem is focussed on oil and gas exploitation and delivery systems versus Native rights and land claims negotiations.

Native organizations fear the potential uses of their information by government agencies and corporate bodies and are, therefore, reluctant to make their reports accessible through libraries. The corporations, on the other hand, have a long tradition, supported by proprietary law, of restrictive access to internally produced information. This propensity has tended to increase in the recent atmosphere of confrontation produced by the conflict between corporate goals and the people in their way.

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[4] Bekar, Carol. " The Northern Studies Library: computer-aided cataloguing for a small special library." In: Proceedings of the 8th Northern Libraries Colloquy, pp.63.

The current realities of large scale economic development in the north and the rapid political organization of Native peoples have spawned an adversary relationship between the groups involved in these processes. In this atmosphere, information is regarded as a potential weapon and the problem of who has access to what is of crucial importance. In this context, does the "neutrality" of libraries have meaning? During the waging of political and economic battles, what is the proper role and function of libraries in obtaining and making available this information?

Although the Committee has found no easy answers to these questions, we feel that our cooperation will lessen the competition for this elusive material and thereby increase the chances of acquiring it. It is hoped that tactful and persistent efforts by one library will lead to confidence on the part of the donating body which can impose restrictions of confidentiality on sensitive documents. The Committee feels that these restrctions will, in time, be lifted. The network participants will have shared access to whatever documents are made publicly available, will have saved time and money in duplication of the acquisition effort, and will have created a comprehensive and valuable resource base for future research in the region.

Early in 1979, the Committee began work on the text of a Protocol d'Entente to outline the basic elements of a cooperative northern information network in Quebec, to indicate some directions and activities that the member institutions might take that would foster its development, and to suggest some of the commitments and operating conditions, including financial arrangements to which the participants can agree in principle.

In October 1979 the member institutions signed the Protocol d'Entente that, among other things, instituted the Information Nord Québec/Information North Quebec (INQ) to serve as the major northern database and collective and cooperative bibliographic information service for northern studies in the Province of Quebec. INQ might eventually provide a variety of services that could range from a machine-readable database, to printed, selectively annotated bibliographies, to document delivery systems where feasible, and to multiple-user inquiry services. The Northern Documentation Committeee, officially established by the Protocol d'Entente as the governing body for the INQ network, sets policy, defines goals, and oversees their implementation.

The Committee decided that the creation of a union catalogue in machine-readable form representing the holdings of the four centres was the first step in building a northern database and in sharing its information. Although it was neither economically nor tactically feasible to begin by designing an online database, the committee required a computer-produced union catalogue that permitted subject as well as author access to its combined holdings. The initial problem of system incompatibility among the participants greatly influenced the committee's decision to use

KWIC (Key-Word-In-Context) programs to integrate the various machine-readable files of bibliographic records. Although KWIC indexes tend to become voluminous with successive cumulations, the network gained the advantages of diminution of clerical effort to make its records machine compatible, the easy addition of new material, and the production of printed catalogues that provide access by author and key words in titles. KWIC programs can also accommodate the addition of keywords not found in titles, thereby providing a mechanism for the introduction, on a selective basis, of some form of vocabulary control to the database.

The committee intends to take up the question of controlled indexing in its 1980-81 meetings. The choice of a common indexing system, i.e. natural language or numeric codes, is an important decision and will entail possible changes in some participant's current method of processing documents. Because INQ serves a bilingual clientele, the use of numeric codes, such as the Universal Decimal Classification is very attractive. This choice requires a change in document indexing for two of the participants or the acceptance by NSL, which uses a numeric code, of indexing these documents before entry into the database. A translation into French of the subject index to the UDC is also required, but could be built from the French version of UDC. The use of natural language indexes, e.g. key words, raises the political and practical problems of choice of language and the time-consuming task of thesaurus construction because no comprhensive thesaurus for northern studies now exists with the possible exception of the Arctic Science and Technology Information System (ASTIS). Because ASTIS is available only in English, extensive work would be needed to compile a French translation.

Another idea under consideration is to devise a correspondence between the keyword list currently developed and used by the Centre de recherche du Moyen-Nord and the UDC used by the Northern Studies Library. This would permit machine translation of French keywords into UDC numbers and for one participant eliminates the onus of system change or reclassification of documents to achieve vocabulary control in the database.

All participants in the INQ, with the possible exception of the Centre d'ingénerie nordique (CINEP), feel that the introduction of vocabulary control to the database is an important enhancement to its quality. Because CINEP is concerned solely with sci-tech literature, they have found that words in titles are an adequate subject approach to their literature. The other participants have significant holdings in the social sciences and humanities, where titles are often a less than adequate expression of the subject under consideration. The other participants also place a higher value on regional approach than does CINEP and have found that geographic indicators are often absent from titles. The Committee hopes to find an economic and

effective solution to this problem in the current year.

The union catalogue in progress, the committee turned its attention in 1979-80 to the dissemination of information about on-going research and to introducing itself to a wider public. The committee elaborated the text of a brochure to announce the formation of the northern information network and to describe briefly each centre and its information resources and services. We decided that a newsletter, produced at regular intervals would be an appropriate vehicle to inform interested individuals and organisations about northern research projects in Quebec or by Quebec researchers, employment opportunities, fieldwork, and important acquisitions recently received in the collections of participating centres. The Centre de recherche du Moyen-Nord accepted the task of editing, printing, and distributing the first volume of the INQ newsletter, the first issue of which appeared in April 1980. Services now available through Centres participating in INQ are access to all non-confidential documents held by members, referral of reference questions to subject specialists in any of the centres, computer searches in the commercially available online bibliographic databases, including ASTIS and the Boreal Institute catalogue, and a regularly issued newsletter.

In 1980-81, the Committee intends to consider the problems associated with further integration of its services, the introduction of controlled indexing to the database, and the implementation of some of its future projects. INQ expects to have available in the next academic year, a union catalogue of its holdings for sale on microfiche, and a bibliographic database of its holdings in machine readable form.

Future INQ projects include:

1. Expansion of the database to include the northern literature held in the main libraries of the universities to which the centres are affiliated.

2. Enhancement of the database through the introduction of controlled indexing.

3. The possible inclusion of other Quebec documentation centres outside the univeristies with large holdings of northern literature, such as the Société de la développement de la Baie James or Native organizations.

4. A printed bibliography of the literature relating to the Quebec-Labrador peninsula, especially to update the Cooke/Caron bibliography of 1967.

5. The production of specialized topical or regional bibliographies on demand.

6. Online access to the database.

In the brief span of two years, the participants in INQ have been able to identify some of the major problems inherent in the acquisition and dissemination of northern documentation. The institution of a common database is an important step towards solving the problem of access to this elusive body of literature. The publication of the INQ newsletter is another means of communicating northern information to researchers within Quebec and across Canada. The Committee hopes to attract other eastern-based documentation centres with northern holdings to participate in the growth of its database and in sharing the documentation contained therein.

The Canadian Geoscience Database

Kay Gunn, Canada Centre for Geoscience Data

The Canada Centre for Geoscience Data is a very small part of the Department of Energy, Mines and Resources in Ottawa. I will describe three things I hope will be of interest.

First, the database itself. The subject material is the Earth Sciences - geology, mining and petroleum. Coverage is more from the scientific point of view than the technical - we are not getting into mining and petroleum technology, but mining and petroleum as resource areas, energy as a resource area, uranium but not solar and wind energy. The geographic coverage is Canada: documents produced in Canada on these subject areas or produced outside Canada describing Canadian geology and resources. The documents come primarily from government departments, the federal Department of Energy, Mines and Resources and the provincial departments, because in Canada the mining and petroleum resources are under provincial jurisdiction. We are beginning to get into theses, we're beginning to edge into the journal literature and we have a very large component of unpublished industry material.

In Canada, the provincial jurisdiction over the resource industries means that the mining and petroleum companies must deposit with the government reports that describe the scientific work that they are doing. Some of these reports have very good scientific material in them. They must prove they are doing a certain amount of work in order to retain the concessions they have been granted. There is confidentiality on some of these reports, but not all of them; it depends on the jurisdiction and sometimes on the type of claim and so on. The reports are indexed whether they are confidential or not, because the government agency or another mining company may be in a position to negotiate to obtain access to the report when they are indexed. The file at the moment contains close to 60,000 items and the figures on the north may be of some interest: -

Yukon Territory - about 2,000 items of which 600 are published
Franklin District - 13,000 of which 700 are published
Keewatin District - 700 of which 250 are published
Mackenzie District - 4,800 of which 1,550 are published

The records are pretty standard in nature; they contain title, source, and extensive special keywording which is done by geologists. The unique aspect of the record that we insist on is a very tight geographic control, based on the National Topographic System, which describes specific areas in blocks.

The products and services from the database have been somewhat murky mainly because I have been the only one there. We are providing access to the file through the contributing agencies - these are the provincial government departments and various federal departments who generate the documents and who do

the coding. They are variously publishing indexes, etc., to their materials, e.g. Department of Indian and Northern Affairs, Geological Survey of Canada. The file is accessible online through any of these organizations. We hope it will be commercially online in the near future.

The second thing of interest is the manner in which the database has been assembled. It is a decentralized and a co-operative operation. It is decentralized in that the organizations which are producing the documents, or which receive and file the documents from industry, are doing all the coding. This means that they set the priorities as to whether to start on published or unpublished material. The quality is primarily up to them and they provide the service point. It is centralized at the Geoscience Data Centre in that we co-ordinate all of this by maintaining a keyword thesaurus, which is heavily controlled, and we provide the computer services at the Department in Ottawa. We use an old batch system at the moment which was donated by Imperial Oil to the federal government when the operation began in 1967. It was basically a library system and did the job very well at the time. However, it has become very difficult to live with in this modern age and we are in the process of changing that and acquiring a much more modern computer management system. Perhaps the worst feature of the old system was that it was inherited; no criteria were applied from our point of view; but that is not too surprising since the people who started the database really didn't know where it was going to go. They knew basically that they wanted to identify the literature for the geological community, the resource community, and to help people find it. But in 1967, how you went about that and did it on a computer was pretty mysterious and in some ways still is. However, having lived through that all I can say is "start somewhere", "get in and do something", but don't start necessarily with a completely comprehensive system. Start small and go through the whole cycle - producing products, getting user feedback and gradually go around again in a larger cycle. Allow for the fact that you will have to re-index that whole first area depending on the scale of things, 100 documents, something like that, and then go around again.

In order to take ourselves by the bootstraps and get into the modern age we started last year to move ourselves onto a new system. We didn't know what that was going to be. My main criteria in starting that project were that I didn't want anybody making any prior assumptions of what the system ought to be. I wanted us to go with a clean sheet of paper, define everything we knew about what we needed, what we didn't want and then what was available, compare these three areas to see what we ended up with. I had some inclinations, others in the office did and I am satisfied that we did take a clean sheet of paper, lay out all the material objectively and then compare. The other two main criteria that I applied were that nobody was going to write a new computer program, let alone a whole system, for us to go to. I am convinced that there are probably 200 database management

systems, file management systems, library systems, what have you, out there that could be taken off the shelf, that any one of us here could use, that would get us through. I thought that all we needed to do was find one that would do the best job for us with the least pain, but no one, not anyone, was going to write us new programs. The other thing was that whatever we did, whatever we chose, - not just in the sense of a specific database management system, but a system in the broader sense allowing for our data entry from all across the country, file management, different kinds of products, various printed forms, all things that go into living with the whole operation - the whole thing had to allow for change, because that was the one thing that was not understood back in 1967, was the degree of change.

We set up several phases in one study, the first of which was a requirements definition. We employed a consulting firm in Ottawa, after checking on all the companies and finding the one which had a particular man who had enormous library experience and struck us as being a) very intelligent and b) compatible and communicative and easy for us to work with. He sat down, picked our brains, talked to our users, talked to our computer agency, other people in the field, and took as objective a view as possible of all the things that we might want to do. He listed them all and we then set them in priorities according to whether we absolutely had to do them, whether they would be nice or whether it would be great some day. We selected the UNISIST standard for the records and everything that followed in our requirements for software selection hinged on that. A subsequent step, which we've just finished, was to identify as many of the software packages that are available as possible and compare them to the requirements. We did this fairly superficially at first giving a short list of ten. We then compared those in detail against the 56 requirements we had listed and used the University of Alberta study of 1973, which resulted in the selection of SPIRES, as the model for a weighting and ranking approach. We ranked all of the requirements, we ranked each of the software packages against each of the requirements, multiplied the two numbers and then added up the scores giving us a very clear winner in an HP3000 system from IDRC. I hope to be moving into implementation and a massive conversion project later this year. Once we have that done, the file will be in shape to make it available through commercial vendors.

Bibliographic Database of the World Data Center A for Glaciology

Claire Hoffman, World Data Center A for Glaciology

The World Data Center System was set up during the International Geophysical Year to archive and make accessible as much of the data as possible collected during that time. It is presently functioning under the guidelines of the International Council of Scientific Unions; there are seven disciplines co-ordinated by the National Academy of Sciences. The World Data Center for Glaciology in Boulder is funded by the National Oceanic and Atmospheric Administration, Environmental Data and Information Service. Glaciology's mission is to archive and make available data from all aspects of the cryosphere; glaciers, seasonal snow cover, avalanches, permafrost, polar ice sheets, sea ice and freshwater ice. We have bibliographic and numeric data, photographs and satellite imagery. We participate in international exchanges with the data centers in Cambridge and in Moscow, and we supply data to users through our publications, through tailored bibliographies, and data sets on magnetic tapes, cards, etc. We survey new data sources and needs, providing referral services to other organizations that hold cryospheric data. We try to collect as much information as we can about who has what so that we can put our requesters in touch with the best data source.

That's just a general description of our activities. The main part of my talk concerns our bibliographic database, and the cooperative cataloguing arrangement we have with the Library of Congress.

When the decision was made to produce a machine-readable catalog and index to the World Data Center library collection, the software choice was an information storage and retrieval package available in-house at the National Oceanic and Atmospheric Administration (NOAA), our funding agency. The package is called OUTFOL, and I will describe some of its attributes, both positive and negative, that have shaped our user services. The second half of my talk will be an overview of the mechanism of shared cataloging with the Cold Regions Bibliography Project of US Army CRREL at the Library of Congress.

OUTFOL, our information storage and retrieval (IS & R) package is a file management system developed at NOAA-Boulder based on an Australian CSIRO-developed program called INFOL, which is in turn based on CDC's INFOL, written for its old 3800-series computers. OUTFOL has an indexed-sequential file structure, in which pointers are used with each data field to permit full-text searching. Data entry is via the Data Center's two hard-copy terminals, with file updates accomplished in a batch processing environment. Data entry operators use an interactive editing language to build update files that are then submitted for processing against the current version of the database stored on disk. Two previous versions of the database

are stored on magnetic tape for security.

One of the problems with the present system is that the CDC6600 computer system is saturated, and suffers additionally from ancient hardware. This precludes an online IS & R system, partly because of file size limitations and partly because response time is intolerably slow. Conversion to the Network Operating System (NOS) running on two linked 660's with shared mass storage is in progress, but is slowed by hardware unreliability. This conversion may speed turnaround and response time. It will also give us more memory size and more storage, but there have been problems with the conversion.

In December 1979, fiscal restrictions within NOAA forced us to close our database after 3500 entries and begin a second database. File storage costs of $12.00 per day for three disk versions of the 4 million character database precluded continuing in that mode. So the Data Center has two databases: one includes documents cataloged during 1978/79, and the other, documents in 1980. The second factor limiting file size for us is the inability of the current 6600 computer configuration to hold the 4 million character file in memory during certain sort/merge operations. Producing the subject index for the 1978/79 database, for example, required splitting the data into twelve sections, sorting and formatting each in twelve separate batch jobs, then merging the twelve sections for final output.

Yet another limitation of OUTFOL itself is the awkwardness of its retrieval language. We are able to search full text, but comparison of a simple search command in DIALOG with one producing the same result in OUTFOL demonstrates OUTFOL's verbosity:

in DIALOG: select glacier? and Greenland

in OUTFOL: Retrieval criteria (*3* or *22*) equals glacier* and (*3* or *23*) equals Greenland*

DIALOG uses four words while OUTFOL requires eleven words plus ten asterisks and two sets of parentheses, properly placed. Specification of report formats is equally verbose, and OUTFOL in both cases is intolerant of spacing errors. In order to get around this, we have produced a large number of indexes to the file and try to make it accessible as though it were a printed index. This somewhat defeats the purpose of using a computer, but it is a limitation that we can get around only if the computer support system changes. Within the next one to two years we are promised access to a Univac system at the National Climatic Center in Ashville, North Carolina. This will be an EDIS-wide computer; it will be large enough to handle much of the computing in EDIS. It has DMS 1100, which is a good data management system, and we are anxious to see whether a) we get access to it, b) whether the whole switch-over is made, and c) whether DMS 1100 suits our needs. We are starting to look into that now to see

whether it can be used and whether we can convert our data to that system.

On the positive side, OUTFOL has very sophisticated sorting and formatting capabilities. Our Accessions List consists of a subject listing having each citation repeated as many times as there are subject descriptors, and an author listing having each citation given only once. OUTFOL produces the Accessions List as camera-ready copy, with only the double-columning done by post-processing. OUTFOL can produce left, right, or center justified paragraphed output. It can produce tabular sorts on any field, outputting an index listing for each data value and its corresponding accession numbers. However, a tabular sort in which the author field is permuted, does not permit linking titles with authors, only with accession numbers.

We have produced two bibliographies for publication in Glaciological Data using OUTFOL, and are pleased with its formatting capabilities but less satisfied with its data entry and retrieval language and its unimaginative indexes.

Now that you know some of the outstanding limitiations of our IS & R package, I would like to move on to describe the mechanism of shared or merged cataloging with Dr. Thuronyi's Cold Regions Bibliography Project at the Library of Congress. For brevity, I will hereafter refer to this group as "CRREL".

Early in the planning stages of our database, an agreement was reached with CRREL to cooperate as much as possible in preventing duplication of effort. Since CRREL's subject interests were closely related to the Data Center's subject interests, shared cataloging was seen as one sensible way to reduce costs and facilitate exchange of bibliographic information among at least two institutions. The mechanism of shared cataloging that resulted is based on the MARC II data format. CRREL prepares for us magnetic tapes containing the MARC-format records used to produce its Bibliography on Cold Regions Science and Technology. These quarterly tapes are processed by the Data Center's MARCFOL program to update an indexed Data Center tape file of CRREL cataloging records. MARCFOL, a format-translator, reads MARC-format records from the CRREL tapes and writes them out in 80-column card images that are compatible with OUTFOL, the IS & R package. MARCFOL = MARC + OUTFOL; another example of a programmer's clever mind at work!

Documents received by the Data Center are manually checked against the printed CRREL indexes, and CRREL accession numbers are marked on documents that CRREL has cataloged. The data entry operator then creates a file at her terminal containing CRREL numbers, and runs MARCFOL against that file. This results in a new file containing 80-column card images of CRREL cataloging records, that is then added to the Data Center's OUTFOL-format database.

At this point, citations have been added to our database for documents owned by the Data Center and cataloged by CRREL. The next step is significant and perhaps unique: Data Center catalogers match documents with CRREL cataloging data, adding to the computerized record additional information indicating receipt date, location and UDC classification number, and geographic region to which the document content pertains. The significance here is that we do not duplicate either descriptive cataloging or data entry keystrokes for those parts of the citation common to the CRREL and Data Center files, yet we are able to fully integrate these common portions into our data file, and to integrate the documents quickly into our collection.

After two years of operation, an evaluation of the cataloging arrangement can be attempted. Benefits to the Data Center are apparent in two major areas, the first being a saving of approximately 25% of cataloging and data entry costs. About one-half of our accessions are cataloged by CRREL, and data entry time required to put these CRREL records into our file is about one-half that required for original cataloging and data entry, so we save roughly 25% overall. There is, however, a trade-off for the cataloging staff, who much prefer to do original cataloging. It is somehow not as satisfying to add to an already existing record as it is to create an original.

The second way in which the Data Center benefits from cooperation with CRREL is by circumventing the need to employ catalogers facile in a broad range of foreign languages.

CRREL derives acquisitions benefits from this cooperation. The Data Center sends to CRREL items within CRREL's purview not already cataloged by CRREL. CRREL catalogs them and adds them to its microfiche collection. Because the Data Center acquires as many obscure and unpublished documents as possible, we can sometimes fill gaps in CRREL's collection.

After the initial programming required to interface MARC-format records with our OUTFOL-format data file, cooperative cataloging between CRREL and the Data Center has been a smooth and efficient process. There remains a need for further vocabulary control, a project the Data Center had intended to pursue given the requisite funding. At present we exchange subject descriptor lists with CRREL, with both groups attempting to be as specific as possible in selecting new descriptors.

Another possibility we at the Data Center would like to investigate is the feasibility of adding unique Data Center holdings to the COLD REGIONS data base. This may or may not be worth the effort required, but because there is little reason to believe our database will ever be online, a preliminary investigation is probably warranted.

The Data Center would like to know whether access to its collections online as part of the COLD REGIONS database is of any

interest to the organizations represented here. I should note that this subject has not yet been discussed with anyone at CRREL, so pursuit of this idea is subject to their approval. An alternative, and far less costly method of access to our collection is via the microfiche indexes we are presently preparing. Using computer output microfiche, we project replacing a thirty-inch stack of paper with twenty-two microfiche containing the 1978/79 database and its six indexes: personal and corporate author, title, subject, geographic, and CRREL number. The microfiche project is scheduled for completion at the end of June, and the fiche will be available on request for a nominal charge, perhaps $15.00-$20.00. We would be interested in knowing what would be most useful for your purposes.

I will be happy to answer specific questions or provide more detail about our bibliographic database. Please feel free to contact me at the Data Center if questions remain after the Colloquy.

OIEC KWIC Index

Judith A. Whittick, Ocean Engineering Information Centre

The OEIC (Ocean Engineering Information Centre) was established in 1976 to provide an information search service in the subject field of cold ocean engineering to three sponsoring groups:

C-CORE (Centre for Cold Ocean Resources Engineering)
NORDCO (Newfoundland Oceans Research and Development Corporation Ltd.)
Ocean Engineering Faculty, Memorial University of Newfoundland

The principal geographic areas of interest were, and still are, offshore Labrador/Newfoundland and the Canadian Arctic. It was initially identified that a specialized technical collection would have to be established to support the information search service. The collection would contain technical reports, conference literature, consulting and contract reports, maps, charts, satellite imagery with a heavy concentration of Canadian material. Collection policies were established, but it was found that because of the way engineers operate (they will undertake a problem, find a solution, and then move into another subject area) the collection policy is often out of date. However, we do have certain guidelines: we only go back six months for conference materials; we go back two years for technical reports since we feel we are an information centre and not an archive.

The University's major commitment to the Centre was to provide support in kind, allowing the OEIC to access without charge existing University facilities. Capital was provided by NORDCO and C-CORE (the latter also management services). The Library Systems division of the University Library had already an existing KWOC index in operation which was suitable for indexing the OEIC technical collection. An online system (through QL) was considered, but the capital expenditure was too high to make the system feasible at that time. A decision was made to use the KWOC program for the OEIC collection with the realisation that such an indexing system would have to be reviewed after a number of years of operation.

The OEIC only has a small indexing capability on staff (1 professional plus 2 clerical), the documents being indexed by the information assistant while the information researcher only advises on enhanced indexing or problem solving, the majority of the information researcher's time being spent on information work. Because of the nature of the subject, it is extremely important to process and index documents immediately upon receipt and not to develop a backlog . Documents are mainly indexed using the keywords of the title. If the title is not indicative of what the document contains, other keywords are used from a number of different sources (thesauri and/or a word frequency list which

has been generated from four years of operation of the index). It should be remembered that we index from the point of view of what would be useful to the groups in Newfoundland.

The computer program is KWIC Program 360D-06.7.014 with a KWOC capability. Items are indexed onto coding sheets, these are then input onto the library computer (PDP-8E), the sorting program then run at the Provincial Computer Services Centre (NLCS). To date, there are 15,000 items indexed. A master file is produced in January of each year with two cumulative supplements produced in May and September. We are not finding this frequent enough for our users; four months is too long not to be able to access information we obtain. We find the major use of our collection is of material we have obtained and identified in the last six months. We are hoping to develop the capability to produce a cumulative supplement every 2 - 3 months, but this will depend on the University Library's budget. In 1979, NLCS developed the capability to produce COM (Computer Output Microfiche). This allowed the OEIC to generate its index onto COM fiche and thus share its resources with others across Canada, the United States and the rest of the world. The microfiche is available on annual subscription, the 1980 subscription price is $60.00 for academic and government, $95.00 for industry.

There are a number of advantages using the KWOC index for the OEIC, the major one being cost. The computer input operations are absorbed on the library budget. This quick indexing approach, with the minimum number of subject headings being assigned and limited verification of entries (documents are catalogued in hand), has allowed the index to be very current. (Analytics of periodicals are completed within 48 hours of receipt of the issue). The OEIC collection is a current collection and makes no attempt to be archival. This summer's project is to weed out many of the documents collected in the first two years of operation, acquired under programs which are no longer in operation. The OEIC collection reflects the engineering orientation of the group, where a problem is identified, solutions applied and then a problem is solved; at that, the program is terminated and the research moves into another area. Technology is also changing very quickly and engineering solutions of five years are no longer applicable today. Other institutions, such as the Boreal, with a better indexing capability than the OEIC provides the archival aspect to such a subject.

There are, of course, limitations using a KWOC index. Within such a specialized collection of 15,000 items some words are at such high frequency as to be virtually unsearchable (OEIC has currently 700 items indexed under sea ice). There are no combination facilities as there would be on an online system. Because of the approach to index in-hand, there are a number of inconsistencies of entry. Documents have to be entered onto a coding sheet which is not only tedious and time consuming, but also generates a certain percentage of errors. A recent change from double line spacing to single line spacing to conserve paper

has made the computer printout difficult to read for any length of time. A planned move in the fall will allow OEIC to directly input documents onto a microcomputer.

To date, the KWOC index has fulfilled the objectives which were set in the first year of operation. It has allowed the Centre to index materials quickly and to share its resources (via COM fiche) with others. The Centre would like to spin off its data onto an existing or proposed database (possibly providing copies of the tapes with certain entries tagged for inclusion into a Canadian system). An online system for the OEIC collection would of course provide a more sophisticated approach to searching the collection, but the question has first to be answered whether the extra expenditure of both time and money would better service today's needs of the sponsoring groups. We recognize that there are mistakes in our index, but we look on it as a tool to produce the information we need to respond on contract reports, consulting reports, or research reports in the engineering field.

The Ecology of the Canadian Arctic Archipelago: selected references

Merle Peterson, Western Ecological Services (British Columbia) Ltd.

I welcome this opportunity to give a brief history of the annotated bibliography, The ecology of the Canadian Arctic Archipelago: selected references. The term selected references is purposely in the title because the bibliography makes no attempt to be inclusive. These volumes are prepared on contract by Western Ecological Services Ltd. to the Arctic Land Use Research Committee, Department of Indian and Northern Affairs. I should explain that Western Ecological Services has its offices here in Edmonton and has recently opened an office in Victoria, and that we are a small consulting company.

The first two volumes of this annotated bibliography were published in 1974 and grew from an initial unpublished annotated bibliography prepared for Envirocon Ltd. of Calgary on behalf of Panarctic Oils Ltd. as part of an oil spill contingency plan for part of the Arctic Archipelago. Since publication of the first two volumes in 1974, there have been annual volumes with the exception of 1977. Volume 3 of this series was published in 1975, Volume 4 in 1976, Volume 5 in 1978, and Volumes 6 and 7, the latest published volumes, were released this year. The camera-ready manuscript for Volume 8 goes to Ottawa at the end of this month. Emphasis in each volume is on the current publications so that, for example, 80% of the references in Volume 8 are dated 1979 and 82% of the references in Volume 7 are dated 1977 and 1978. Preparation of Volume 9 will begin in July which will emphasize material from 1980. All these volumes may be requested from:

Dr. D.M. Barnett
Environmental Studies Division,
Northern Programs
Department of Indian and Northern Affairs
Ottawa, Ontario K1A 0H4

The principal objective of this bibliography is to bring together the current and past literature on the ecology of the Canadian Arctic Archipelago, and to annotate the results and findings in sufficient detail so that most users need not seek out the original publication. The compilation of annotated references is intended as a reference collection, if need be a portable reference collection, for users in northern Canada where access to the literature is difficult. It is also intended for users in southern Canada who want a quick reference tool to the ecological literature of this area. Emphasis is on the current literature and on rapid publication of the volumes to provide up-to-date access to the recent titles and results assisted by an indexing system designed for specific ecological elements and

specific geographic areas of the arctic islands. The series fills a specialized need by different users for technical information and a level of detail that is not found in most bibliographies or computerized retrieval systems. The Department of Indian and Northern Affairs office which handles the distribution of this bibliographic series has the best understanding of who the users are. However, I know that users include resource management officers and land use inspectors in DINA northern offices, southern based researchers initiating reviews of technical subjects, southern based institutions or organizations responsible for preparing overviews for environmental impact prediction and libraries both here in Canada and internationally, with interests in the Canadian Arctic.

It is unfortunate in some respects that the policy requirement that government publications be released in both official languages *simultaneously* has meant delays in the release of the English versions while a translation into French is completed. This has detracted from the currentness of recent volumes as it sometimes takes more time for preparation of the translation than preparation of the original manuscript.

The ecological subject matter is particularly broad and includes references on taxonomy, distribution of species and some physiology. It does not include references on human ecology, anthropology, archaeology and sociology except where such references describe use of renewable resources. Also, references from the strictly physical sciences are included only where the subject matter relates to an ecosystem factor. For example, reports, or sections of reports, of the Geological Survey of Canada describing surficial geology or terrain are included, but those describing stratigraphy are not. In general, the term "ecology" is interpreted broadly to include a wide range of subjects descriptive of the life, habitats and surface of the arctic islands.

Although the theme of today's papers is automated northern information systems, this bibliography is not automated nor as yet entered on a database, though it is produced using word processors. Information for each annotation is presented in a numbered sequence in a format that could be adapted to computer retrieval, though this has not yet been done and is not part of the terms of reference of the contract. The first five entries provide the standard citation for a monograph, journal, series or unpublished manuscript. Item 6 is a subjective count of the number of citations in the reference annotated which relate to the ecology of the arctic islands. Item 7 lists the geographic coordinates of places identified in the annotation. For this information to be adapted for computer input, the point method of listing location by latitude and longitude would have to be replaced by the cell method of geographic location. Each system has its own hazards. If you go to a point system you have trouble correlating information that is widespread over an area; if you go to a cell system it is too general.

Item 8 of the format consists of a three-part set of indexing terms which includes a subject index and two geographic indexes - one for land features and one for marine features. Item 9 identifies the source of the annotation, whether it is my summary of the main findings, the author's abstract or if it is derived from some other source such as Dissertation Abstracts International. Item 10 is the annotation which varies in length from a few paragraphs to several pages but averages 1 to 2 pages.

With the cumulative index in Volume 5, a division of some subject headings was made to separate marine, freshwater and terrestrial components of such terms as vegetation, nutrients, invertebrates, physiology, population cycles and species lists. Similarly, the term birds was divided into passerines, raptors, seabirds, upland game birds, and waterbirds and shorebirds, since "birds" was too general an indexing term. This change was made retroactively for Volumes 1 through 5 in the cumulative index which appears at the end of Volume 5.

Volume 6 is a special volume devoted solely to unpublished material relating to the ecology of the arctic islands. A total of 196 references is contained in this volume which represents a selected sample of the information that exists; 65% of this number are papers and reports dated 1965 or later. The sources for this material were primarily federal and provincial government department manuscripts, consultants' reports and the sponsors of those reports such as Panarctic Oils, Petro Canada, Polar Gas Ltd. and reports from special institutions such as the Arctic Petroleum Operators' Association and the Arctic Institute of North America. All of these departments and organizations were most cooperative in making reports available to me.

In the preparation of these volumes, I have relied heavily on many sources and tools which include the Boreal Institute's Northern Titles KWIC Index, Scott Polar Library's Recent Literature, the Arctic Institute of North America's ASTIS program, many accessions lists from government libraries, institutes and university libraries plus the standard indexing and abstracting services which are also accessible through CAN/OLE, QL Systems and INFOMART. The literature itself also has a snowballing effect and there has been a decided increase in the number of specialized subject bibliographies and specialized source bibliographies. I tend to rely on these computerized systems as a back-up. Because I work in a short time frame I usually complete in March a volume encompassing the previous calendar year. Sometimes a volume continues into June because many publications of a given year are not available until halfway through the following year.

Unpublished reports of both government and industry sponsored work remain the most difficult to be aware of and to access. In all fairness, I must commend many consulting companies which have research responsibilities in the North for depositing copies of their results with some libraries.

So much of the information about the North is available in libraries, institutes, universities and government departments located in southern centres. From my own experience, as a southern Canadian, much time and effort is necessary to keep aware of the new literature and to access this material. This often involves trips to several different cities. For northerners, this task is compounded by distance and cost. This is one of the reasons why the annotations in this bibliography are designed so that most readers need not refer to the original documents. Northerners' needs for information about their region and its environment can only increase with impending issues of land claims, land-use conflicts, regulation of resources, both renewable and non-renewable, increased tourism and increased transportation into the Arctic. It is apparent that southerners have an obligation to make available as far as possible the information about the North that is housed in southern centres.

In their recent publication Lancaster Sound: issues and responsibilities,[1] the Canadian Arctic Resources Committee expressed this need. Several recommendations are listed in this report "... to improve the knowledge base, enhance the availability and usefulness of knowledge, and strengthen the capability to take appropriate action to ensure that best uses are made of the diverse resources of Lancaster Sound." One of these recommendations states "There is an obligation to keep all northern citizens informed of policy and scientific developments that affect the North, and of the proposals, progress and problems related to projects in their area." The recommendation goes on to say "...it is necessary that technical and policy information be made available in a form that is usable by northern residents." Similar concerns were expressed earlier in the discussion paper Ethical principles for the conduct of research in the North.[2] It would seem necessary that to meet most northerners' needs for information a system of information depositories is required at several locations in the North. These need not be government departments but should perhaps be established through the territorial public library system and should include government publications as well as reports from industry and consultants. The opinion of the Northern Libraries Colloquy on this issue would be most welcome.

Q. Why couldn't they follow the policy of Environment Protection Service? EPS issue documents in English stamped "Advance Copy" while waiting for the French translation to be made.
A. I would really like to be able to answer that. We have put the same question to the minister and to many people. It's a policy decision that we have to live with. We hoped it could change. It

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[1] Roots, E.F. Editor. 1980. Lancaster Sound: issues and responsibilities. Canadian Arctic Resources Committee, Ottawa. 110 pp.
[2] Canadian Man and the Biosphere Programme. 1978. Ethical principles for conduct of research in the North. Canadian MAB Communique No.6:1-20.

has nothing to do with language rights as most of the information that is annotated is already published or available in English.

Q. One way of overcoming this is to publish jointly as a federal-provincial document using the provincial publisher, or as a joint federal-corporate publisher.
A. It is a puzzling situation because there are some government publications that come out in one language only.

Developing Alaska Bibliographic Databases

Barbara Sokolov, Arctic Environmental Information and Data Center (AEIDC)

The Arctic Environmental Information and Data Center (AEIDC) of the University of Alaska was established by the Alaska legislature in 1972 as a research and referral center for Alaskan resource and scientific information. Although we maintain in-house data files, our chief function is to direct people to sources of needed information rather than to be a repository of the material itself.

Approximately one-fifth of AEIDC's budget is financed by an annual state appropriation, insuring that our facilities are available to the public; the balance comes from contracts with state, federal, local, Native, and private agencies for specific tasks. Since 1977 AEIDC has contracted with various organizations to prepare a number of annotated bibliographies, using a word processor (a small scale "automated" information system). As a result, we have developed procedures for designing and implementing these systems. I would like to share some of our experiences and observations with you.

Everyone seems to have his own definition of what an information system is. Let me give you my version in order to clarify what AEIDC is doing. Let's start by agreeing that, for our purposes, an information system means "access to literature". There are a number of non-automated "information systems" that come to mind: the index in a book, the card catalog in a library, and the various subject guides to periodical literature (e.g., "Readers' Guide to Periodical Literature," "Chemical Abstracts," or "Engineering Index"). Computers have given us the ability to "automate" these systems.

Networks of libraries have merged their card catalogs onto computer databases, giving participants instant access to the holdings of a number of libraries in the U.S., the Ohio College Library Center (OCLC) and Washington Library Network (WLN) are examples. The U.S. Library of Congress has a "machine readable" MARC system augmenting and now replacing its card catalog. In spite of the sheer volume of holdings represented by such systems, they are still nothing more than enormous card catalogs. They represent the monograph holdings and exhibit the strengths and weaknesses of the old manual card catalogs.

Although these computer-based library networks do not usually provide subject access to periodical literature, the publishers of literature indexes have not been idle; they have automated various indexing systems. In fact, so many of these various automated indexing services are available that there are commercial vendors who buy rights to the databases and package a number of them to sell to users -- SDC and Lockheed, for example.

Thus, in the U.S. at least, a patron can have immediate access to the published literature in almost any field.

The problem for those interested in "northern" information is the term "published." The indexing services, although focused on a particular subject area, limit their coverage to national and international periodicals and publications. In Alaska, the majority of research is overlooked by these commercial services because it does not appear in the "publications" they cover. (You are probably familiar with the Franklin Research Institute study by Janet Orr that found that thirty percent of the articles covered by Arctic Bibliography, Volume 16, had been missed by the commercial databases. Our cursory experience has found that the Alaskan coverage is even worse.) AEIDC is attempting to fill this gap by developing its own searchable database of Alaskan environmental information.

The number of individual research projects going on in Alaska probably approaches 2,000 a year. We have documented more than 1,720 in calendar year 1978 and are in the process of documenting those for 1979. Most of these projects will result in a written report, a copy of which may be available in a library somewhere in Alaska. A majority of these, however, will never leave Alaska.

Since its beginning, AEIDC has been keeping track of Alaskan and arctic environmental literature. Originally, the "outputs" were synthesis reports or bibliographies. We are now using "automation" to produced indexed bibliographies, and each bibliography becomes a part of a growing database of Alaskan information.

In 1977, as a direct result of several projects, AEIDC acquired an IBM Word Processor 32, and made the first steps toward automation. The WP/32 is sort of a hybrid. It combines the features of a small data processor with those of a large word processor. For those of you who don't know the difference, let me give you my understanding of it.

Our data processor deals very rapidly with rigidly defined fields. For instance, you can enter anything you want in the field allocated for "country", but it can only be three letters long. The word processor portion of the WP/32 uses common typewriter symbols. You can enter any number of letters (within generous limits) for each category, as long as it is separated from the next bit of information by a typewriter tab or carriage return. The drawback is that the word processor literally has to count tabs to find the requested piece of data. The data processor half, on the other hand, can more quickly retrieve data since each category has an exact location. Thus, although the word processor can be more or less programmed, it takes much longer to do the task. However, since the fields can be of almost any length, the word processor side is much more convenient to use for bibliographies. Another feature of our word processor is

that entry is via mag cards, which means that any secretary can type entries at a mag card typewriter, eliminating the need for a keypunch operator.

As soon as we acquired the WP/32 we began to automate, using both the data processing and the word processing capabilities on three projects -- one requiring a machine-readable, computer-type output; the other two needing an indexed, people-readable output.

The project that required data processing was large and complex. Each entry was tied to an existing bibliography, and the format and philosophy of indexing were imposed by the contractor. We successfully completed the job and created the required database, but its usefulness is limited to its original purpose -- documenting the historical usage of Alaskan waterways.

The other two "founding" projects were smaller in scope. One was a series of indexed bibliographies; the other was the automation of our annual Current Research Profile for Alaska.

The Current Research Profile (CRP) is an in-house exercise we go through each calendar year. We attempt to list every research project active in Alaska -- its principal investigator, affiliation, and address; co-investigators and their affiliations; funding agency and amount; the geographic area of the state being studied; subjects covered; and an abstract. We think we have documented from 90 to 95 percent of the projects. For the past two years the information has been entered onto a computer database. The entry and editing of calendar year 1979 projects are currently in the final phases.

The third project for which we acquired the word processor was a series of indexed bibliographies developed for the U.S. Department of Energy. They resulted in the development of our "format" for bibliographic citations and included some very detailed indexes.

Having the CRP and bibliographies on the word processor has distinct advantages: the data can now be searched and a patron can receive a printout of only those projects or citations which relate to his field of interest; the data can be easily manipulated and edited; and finally, the word processor can be programmed to produce the final copy -- ready for publication.

The significance of these bibliographies is that they initiated a procedure that has endured long after they ended and the team had scattered. Each bibliography can stand alone, and by not altering the essential elements of the citation format, we have been able to reuse the contents for other tasks.

AEIDC's various projects to "automate" northern literature have been supported by contracts which have been limited to specific geographic regions within Alaska but have broad subject coverage. We have prepared bibliographies on the three proposed

gas pipeline routes, three specific coal-bearing regions, the western coast of Alaska, the NANA (Kotzebue Sound) area, a small portion of the Beaufort Sea coast, and Prince William Sound. Currently, we are working on a bibliography of literature dealing with Alaska's vast coastal regions. When this is completed, we will have covered all but a few areas in interior Alaska. Each new project augments the database, and the database provides a starting point for each new project.

Here are some of the lessons we have learned. The machine can do all kinds of manipulations at relatively low cost, but preparation of these data takes time; for example, assigning of index terms, locations, etc. Our first indexes pinpointed each location, used huge thesauri, and listed geological terms and taxonomic names. Each index took a great deal of time and effort.

The requests we get for information tend to be by geographic area rather than subject. Patrons more often ask for everything we have about the Seward Peninsula rather than everything about petroleum geology in Alaska. Projects and contracts also tend to require everything about a geographic region rather than everything about a subject. I suspect that this is true of other "northern" libraries. The first systems we "automated" were regional in scope. We limited our geographic indexing terms accordingly. I wish now that we had used our established, state-wide geographic divisions and had the indexers include a listing for every region covered in the document. This would have taken very little extra time but would have been much more cost effective in the long run. We now find ourselves reexamining earlier listings to determine if they covered more than just the region we originally indexed under the contract limitations. In addition, our initial indexes pinpointed geographic locations by: mileposts on pipeline routes; township and range; and longitude and latitude. We learned that exact locations are rarely worth the time expended to enter them. We now use broad general regions for Alaska, sometimes including specific geographic names, if it is given and the feature is significant.

Tradeoffs also occur with subject indexes. Since our bibliographies have been specific to regions, but all-encompassing in environmental subjects, we find that a thesaurus limited to broad, general terms is both more practical and more useful. Detailed subject indexes require expertise in the field, and in our case, this means all of the natural sciences. Obviously, however, an index that deals with a single subject can and should be detailed. We have a controlled thesaurus of some 100-200 terms that are broad breakdowns to particular fields of northern natural science.

What holds true for detailed subject listings goes double for taxonomic names. Several of our earlier bibliographies included them. I suspect less than ten percent of the practicing biologists and less then one percent of the secretaries can spell taxonomic names. Taxonomic subject listings are one of the

cost-benifit decisions that must be weighed, understanding both the costs and the benefits.

Another such decision relates to abstracts. There is no denying the value of a good abstract. However, to produce a good abstract requires expertise in the field, an understanding of the significance of the article being abstracted, an ability to write, and a good editor. If you can afford all these, by all means include abstracts.

My final recommendation is something we have done right from the very beginning. We do not enter an item that we have not seen; that is, our database is not a compilation of other bibliographies. Every entry is checked by a trained librarian so we know we have a correct and complete version of the citation. Further, we enter where the document is available; therefore, we know it exists, we know where it is, and we can find it again.

In summary, we have found the programmable IBM Word Processor 32 ideal for small-scale bibliographies. It has a large capacity for sorting and storage and is especially useful when used in conjunction with mag card typewriters and the smaller word processor, OS/6. I think such small-scale systems are at least a partial answer to the problems inherent in the "control" of northern literature. They put the indexing and inputting where the literature is being produced and allow the northern user to develop and adapt the system to his own needs rather than try to reformat his needs to an existing system. The Word Processor 32 can print text output (not computer printout), which is important in the more remote parts of the north. High-speed, online telecommunications are great, but they are often impractical in the north, both because of cost and because of communication facilities that are more susceptible to disruption or breakdown.

Q. In order to allow the ongoing annual listing of research going on in Alaska, is there some mechanism in Alaska which obliges researchers to provide documentation to you?
A. No. I wish there were. We base it on what we have listed previously and also contact the large agencies to pinpoint new research projects.

Q. Do the bibliographies you do for a client become publicly available after they are done?
A. We have never had any problem with confidentiality. We did have one report that was not a bibliography, but an assessment of the impact of an artificial drilling island in Prudhoe Bay. We turned it over to the contractor about a week before the North Slope Borough sued Exxon for exactly that sort of development. So that publication was held back until the court case was cleared. Then it was released. We tend to deal in the environment, not with anything technical or monetarily profitable, so the problem does not usually arise.

Richard P. Goldthwait Polar Library

Deborah Jones, Institute of Polar Studies

Interest in polar regions increased during the International Geophysical Year of 1957-1958, and in 1960 the Institute of Polar Studies (I.P.S.), a non-degree granting research center, was established at Ohio State University in Columbus, Ohio. The Institute conducts research in both the Arctic and the Antarctic and in other cold regions throughout the world in disciplines such as geology, glaciology, biology, agronomy, zoology, paleontology, climatology and meteorology.

The library, which has existed since the founding of the Institute, at first consisted primarily of personal research material located in the office of Dr. Richard P. Goldthwait, the Institute's founder and first director. Its main purpose was and is to provide material for researchers at I.P.S. and to complement the holdings of the Orton Memorial Geology Library as well as OSU's Main Library. The I.P.S. library has acquired most of its material through donations and exchange with other institutions. It soon outgrew the main office and was moved into a separate room and a student was hired part-time to serve as librarian. Over the years Dr. Goldthwait has been one of the largest contributors to the library, and upon his retirement in 1977 he donated most of the remainder of his polar collection to the library, which was then renamed the Richard P. Goldthwait Polar Library in his honor. The library continues to grow; it now requires a full-time librarian, and there are plans to move it into a larger room.

The library contains a wide diversity of polar literature, with the main emphasis on geological sciences, glaciology and biological sciences. We have begun expanding in other areas such as polar exploration and history, northern native societies and environmental studies. Holdings include approximately 12,000 titles, with about one-third of the collection being reprints. Reports and serials such as ALUR and other Canadian Department of Indian and Northern Affairs' publications, British Antarctic Survey Bulletins and Reports, CRREL Reports, the Arctic and Antarctic Bibliographies, Polar Record, Arctic, various Alaskan journals and several foreign-language publications (mostly Soviet) comprise a large portion of the library. Books make up a small but growing part of the holdings. There are over 1,000 maps, mostly of Alaska and Antarctica. The library also contains the Institute of Polar Studies Report Series, Contribution Series and Miscellaneous Series -- all being Institute publications. An accessions list is published bimonthly and is distributed internationally to about 300 addresses.

Since joining the Institute eight months ago, I have spent time becoming familiar with the library's holdings, acquiring new card-catalog drawers, trying to make more shelf space in a room with books already stacked to the ceiling, sorting through

material donated to the library in the past, discarding duplicates, and at the same time accessioning new material coming into the library. Some headway has been made in what seemed at first to be an impossible task.

The most time-consuming activity in the library is cataloging material. Not being part of OSU's library system, we do not have access to a catalog-card service such as provided by OCLC or the Library of Congress. We have separate card files for author, title, subject, geographic and series entries. In the past each card has been hand-typed, sometimes resulting in typing the same card nine or ten times if there are several authors and/or subjects. However, some steps have been taken to reduce time spent typing cards. There was talk of puchasing a memory typewriter or a word processor. Each card would still be typed individually, but once the first one was typed, the others would not take long. The information could then be stored to use for typing the accessions lists. A decision on this has been postponed for the time being. It has also been suggested that the card file be replaced by data-processed book catalogs with periodic supplements. However, this is very expensive and also may not be the most convenient system for library users. The solution for now is to type the card once on white paper and duplicate as many as needed onto library cards. The subject and added entries are typed on the top of each card, and the cards are then filed in the card catalog. This should reduce much of the time spent typing cards.

I am now in a better position to be able to think about more long-term goals for the library. The biggest future project is a move across the hall into a larger room. This seems to be an appropriate time to make some needed organizational changes -- in both the classification scheme and in the spatial arrangement of the material.

We presently use an in-house classification system, with material arranged alphabetically on the shelves by main entry -- author, corporate body, or title. This is an adequate system; users are able to find the works they need, although sometimes a little searching is necessary. With the growth of the library, especially with the addition of more books, we have begun to explore the idea of adopting a standard library classification system, which would draw material of like subject matter together on the shelves. The two systems we are considering are the Library of Congress system and the Universal Decimal Classification for Use in Polar Libraries, with LC being the most likely choice in order to make the holdings compatible with OSU's computerized Library Control System (LCS). There are positive and negative aspects of such a change. Being on the computer would make the library more accessible to non-I.P.S. people. This could be a problem if more material begins to circulate outside the Institute, making it more difficult for I.P.S. personnel to find what they need. However, as well as making our library more accessible to others, it would make the entire library system

accessible to us through a computer terminal located in the Institute. It would also be advantageous in that cataloging would be done by the Main Library, eliminating duplication of effort and resulting in more standard bibliographic records. Also, cards would be provided for the classified material. There would, however, be some lag time between when a book arrives in the library and when it becomes available to users. The I.P.S. librarian would still be responsible for cataloging the reprint collection. There are also questions of flexibility -- how would our status as a separate, independent, special library be affected? Another major question is the cost-effectiveness of such a change -- is it really worth it? These are all questions that must be examined before rushing to join the computer age in libraries.

Not knowing the future in terms of the library's classification scheme presents some problems in deciding on the spatial arrangement of the library in its new room. Presently, the library is divided into three sections: reprints, books and some serials are shelved on one side of the room; periodicals are shelved on the other; and there is a small reference section. The distinction that has been made between serials and periodicals is a tenuous one that is difficult to defend. Some might make the distinction between works that are published regularly and those that are not. However, past treatment of such works as British Antarctic Survey Reports and Bulletins in the library does not support this. They are both published irregularly. However, the Reports are shelved with books, while the Bulletins are shelved with periodicals. They are both numbered series and should be considered as such. Another problem with serials is that they have often been treated as monographs and filed individually by author, or sometimes by editor. In some cases, such as when the library only has those parts of a series pertaining to polar regions, this is probably the best thing to do. But for complete series it makes more sense to shelve them together, especially if we join the library system. Some time has already been spent consolidating serials.

There are three ways the library can be arranged. The first is to leave the collection basically the way it is, but put all the serials together, eliminating the problem of trying to distinguish between series and periodicals. This will only present problems if the library does join OSU's system, because the books would be classified and the reprints would not, raisng the question of how to interfile the two on the shelves. The second choice is to interfile everything (except reference) into one alphabetical arrangement. This would still present a problem with reprints if the library becomes classified. Also, the serials need more expansion space. The third, and most likely choice if the library really becomes part of the library system, is to shelve reprints, books and serials all separately. Reprints would remain in order by author (still being individually cataloged); books would be arranged by LC call number; and serials could be arranged either by call number or alphabetically

by title. This arrangement would work even if we don't join the Main Library; but if we don't, it makes more sense to leave the books and reprints interfiled. Then, if a user wants to see all of an author's works, everything is in one place on the shelf.

In conclusion, the emphasis in the library is presently on accessioning and cataloging -- getting the material on the shelves. With less time being spent on card production, hopefully there will be more time to devote to projects such as organizing the library and the map collection and offering more bibliographic services to the researchers. I have begun taking library science courses and am enthusiastic to apply what I'm learning to the library, combining formal library practice with the practical needs of the researchers who use the library. Whether or not computerization is really the best option for the library remains to be seen.

Alaska, WLN, and Coverage of Arctic and Polar Regions Material

Catherine Innes-Taylor, University of Alaska, Anchorage

Alaska first became involved in the Washington Library Network (WLN), an online, bibliographic utility, in 1975 when 5,811 items from the shelf list of the Polar Regions Collection at the Rasmuson Library, University of Alaska, Fairbanks (UAF) were filmed, coded into MARC format at the State Library in Juneau, and batch input into the fledgling WLN data base. A Resource Directory was published in 1975 and was distributed to libraries in Alaska, the lower 48 states and Canada.

In 1977, the Alaska State Library became the first out of Washington State online participant in WLN, with the Rasmuson Library coming online in November 1978. Since then, the Fairbanks North Star Borough Library System, the University of Alaska, Anchorage Library (UAA), the Anchorage Municipal Library System and the Alaska Court System Library have also joined the network and are inputting cataloging and holdings online.

In addition to current general acquisitions, these libraries are concentrating on inputting Polar Regions material, with emphasis on Alaskana. In this effort, much of the original cataloging has been divided up between the libraries. Rasmuson Library (UAF) has taken responsibility for cataloging currently published titles of the University in Fairbanks including various institute publications, the State Library is concentrating on Alaska State Government publications, the Municipal Library System in Anchorage and the UAA Library are sharing responsibility for cataloging the publications of the Municipality of Anchorage, and the UAA Library is responsible for the publications of this campus. Though this is a casual arrangement at this time, the division of responsibility seems to be working well and allowing much wider coverage of original cataloging to WLN.

At present, Rasmuson Library is also involved in a retrospective conversion project (RECON) to correct any errors in the original 5,811 titles input to the database and to add the remainder of their Polar Collections. It is hoped that by November of this year their entire Polar Collection, with the exception of archival material and non-Roman script titles will be input, making this valuable historical collection available to all WLN participants. As one of the larger Polar collections in North America, and the largest collection of Alaskana, the availability of this data through WLN will provide a much needed resource for not only libraries on WLN and around Alaska, but, hopefully, through the development of protocols between networks, a resource both nationally and internationally.

Designed as a comprehensive bibliographic system providing a basic bibliographic database for cataloging input as well as sub-systems for acquisitions and interlibrary loan, usage of WLN

is not limited to cataloging input, but increasingly is being used as a reference source. Also, since it contains holdings information on its titles, it is a valuable tool for interlibrary loan within the state and outside Alaska. At present the Rasmuson Library is the only library in the state on the acquisitions sub-system, but the UAA library will be going online with acquisitions in summer of 1981. Increased utilization of the acquisitions sub-system by Alaskan libraries will make possible some type of cooperative acquisitions process statewide.

We are all committed to utilizing WLN as much as possible, but, for now, online participation is limited by costs to the larger libraries in the state. The line currently in use is costing the libraries involved over $90,000 a year, with additional charges for service, inputting, and products such as catalog cards. Since there is a maximum of 15 terminals on this line, and 12 are on right now, another line will be needed in the near future if many more libraries are added. Participation by smaller libraries is limited to usage of COM catalogues of Alaska holdings. The first of these COM catalogs is being distributed now, and the assistance this will give to interlibrary loan throughout the state will be enormous. Hopefully the Polar Regions material can be made available through COM catalogs to libraries outside the state who have need of this information until there is the capability for them to utilize WLN online.

Currently, libraries in Alaska are attempting to input as much Polar regions material as possible prior to January 1, 1981 and the implementation of AACR II so that conversion of these records to the new format can be accomplished by the computer.

Our staff at UAA hopes to be able to do some type of retrospective conversion project in the near future. Priorities for inputting would be our Polar Regions material with emphasis on Alaskana.

We are extremely enthusiastic about our participation in WLN, and the benefits of this involvement are already evident. Interlibrary loan requests from outside the state are up considerably, the availability of the original cataloging is speeding up the processing of Polar materials and access by Alaska libraries to Alaskan holdings on a statewide basis provides better service to patrons from Dutch Harbor to Barrow.

Q. When you search WLN, do you search just your own files?
A. No. You are searching the whole database.

Q. Do you get locations?
A. Yes. You add your holdings to the database so it is a terrific tool for interlibrary loan.

Q. Do you get a full cataloging record?
A. Yes. It's complete MARC cataloging. You can accept different portions of the record, a shortened form or a complete

MARC-tagged record.

Q. You get databases from outside of Alaska?
A. Yes. Alaska was the first out-of-state participant in WLN and primarily because of the initial involvement with the Resource Directory and because far-seeing librarians in Alaska were very interested in us getting on a facility. Through the depository system, the Washington State Library catalogs Alaska documents which they receive. Alaska documents are also deposited with the National Library of Canada and B.C. It is a very formalized network - MARC, the authority control is very carefully monitored, people review your cataloging and it has to be "up-to-snuff" before it is added to the database. We are very pleased about this; we feel it is one of its advantages. WLN also sells its software.

Boreal Institute Databases Available Through QL Systems

G.A. (Nita) Cooke, Boreal Institute for Northern Studies

I want to tell you about QL Systems, which has been mentioned several times today, our experiences with it and the KWIC index which they vend for us.

QL Systems

QL Systems is a shared information service retrieval system. They are a Canadian firm, a database vendor. However, it is a cooperative venture, between the database producer and QL Systems.

This was particularly so in the beginning, with the Departments of Justice and the Environment as principal contributors who pay QL to build databases for them from their information. They also make some commercial databases available. The sponsorship of the Departments of Justice and the Environment is reflected in the databases available from QL. Many are distinctly Canadian databases and are not available from other database vendors such as SDC or Lockheed.

QL Systems is now available in the United States, and anyone with a Canadian Studies program will find them a very useful source of information. At the moment QL Systems have 34 databases available, and as you heard from Ross this morning, ASTIS will soon be available too. Our Boreal Northern Titles and the Yukon Bibliography have been searchable on this system for quite some time.

Besides the Statutes of Canada which are quite useful to us, they also support Hansard Oral Questions and Hansard Written Questions - these are the questions that are asked in the Houses of Parliament and the answers that are given. These often concern items of northern interest, such as petroleum development in the Arctic Islands.

A database that interests us particularly is CENV, a fully keyworded and abstracted database to references concerning Canadian water resources literature and other environmental topics. The database originally covered water resources only, but is now being expanded to include all environmental topics. It is produced by WATDOC - the Water Resources Documentation Centre - supported by the Department of the Environment. The Boreal Institute has been involved with this database in that we have been under contract to identify and abstract documents relating to the Mackenzie River Drainage Basin. To date we have identified and coded about 1,700 documents specifically on this drainage basin, each identified by the keyword "Mackenzie River Basin". We did not process any references that were already in the database, but QL are working on a system to allow us to add our code and

the keyword "Mackenzie River Basin" to the documents already in the database. A quick way to identify these documents is to do a phrase search for "Mackenzie River Basin" which will retrieve all documents we have input under this contract.

This drainage basin incorporates northern B.C., northern Alberta, northern Saskatchewan, the Mackenzie River valley and a small part of south-eastern Yukon - it covers a large area. Any document relating to that water resource, or what would happen if it was interfered with, such as the building of a dam, has been searched out, abstracted and put into the database. Each has a fairly long abstract and one of the things that our abstracters learn rapidly is that when you are producing abstracts for a database, you cannot use negatives. You cannot say "This document does not include such and such" because when you search under "such and such" you would get a lot of false drops. Therefore you must always be positive when abstracting to input in a database. CENV is strictly a database; it is not published in a printed form. It is a very useful database and we use it often for water-related questions.

QL's search logic is very simple, for some people it is too simple, but we like it because there are no charges for thinking. Most database vendors charge you per connect-second: the minute you are signed on it is costing you dollars. With QL, there is a set fee of $2 to sign on to a database, a charge of $2 per search query and a charge for off-line prints. Any Datapac charges will be additional, but that is not a QL charge.

Boreal Northern Titles

Boreal Northern Titles (QL filename BNT) went online with QL some three to four years ago. We sent them all of the back data on tape with documentation as to how the file was constructed. QL then did their own thing and translated the 10 column source codes into a meaningful citation for the source of the article. By December 1979 there were 54,830 documents in the database. The data is what we use to produce Northern Titles, a KWIC index that we produce every month from the material that we have received that month. It not only includes articles from periodicals,(which are cited as first author and title), and government documents, such as Geological Survey Papers, but also includes headlines from newspapers we receive. We try and subscribe to all of the native published newspapers in Canada and newspapers north of 60. I only index <u>northern</u> news from these newspapers. For example I would not index an article on Afghanistan or Iran. These newspapers are serving their community and of course include southern Canadian and world news, but I only index the northern news. I have tried a couple of experiments and would welcome your opinions. Since it is a machine-readable file I can search it and pull out indexes to specific newspapers. I have produced two mini-indexes - one to Native Press for January 1980 and the other to the Whitehorse Star for January 1980.

As I scan the newspapers for input to Northern Titles I have noticed sources of information that one would not normally think of first. For example, Tapwe lists the temperatures for Hay River, Yellowknifer includes a monthly weather summary for Yellowknife, Nunatsiaq News lists the tide tables for Frobisher Bay. There is a lot of ephemeral news which is indexed by Northern Titles which will never be indexed elsewhere, therefore it is a useful database to search. We try and make it a little more useful in that if the headline is not as informative as it could be, we add a few keywords, e.g. re pipeline. Occasionally I will spell out a name, e.g. if the Whitehorse Star says "City budget brought down" I will change it to "Whitehorse budget brought down". As far as possible though, the headline is input as it appears in the newspaper so that it will be easily recognized when retrieving the item from a citation.

I am able to keep the printed copy of Northern Titles "very tight" since our KWIC programs take note of all the symbols as well as the alphanumeric codes. I only use a 15 word stop list, anything else is stopped at will using an underscore to link the words. The program will only sort on an absolute blank; I know this and so I can make sure only significant words sort as the index.

A secretary inputs all the data for our KWIC indexes and is extremely accurate so proofing and editing the file is not a time consuming task. It is this file which produces the printed index which is sent to QL who then do their own thing translating the source codes and make it available for online searching.

Some hints for when you search the file on QL: when searching, you can search the whole file or specific sections, such as the title, the author or the source. The best thing to do is to restrict your search to the title section, since many of the sources are search words, e.g. Yukon Indian News, Alaska Construction and Oil. By the same token, if you wanted all the articles from a particular source, e.g. Native Press, you could restrict your search to the source section of the file and easily obtain a listing of all articles indexed from Native Press.

Yukon Bibliography

As you may or may not know, we are under contract with funding from the Yukon government to produce the Yukon Bibliography. We are currently preparing the fifth volume in the series. We began where Lotz left off in 1963. The volume for 1963-70 was produced with the aid of a mag-tape IBM typewriter. We soon learned that that was not the way to go. Then we received some funds and had programs specifically written to produce the bibliography. This was back in the days when we only had a keypunch available to us, so the input format is somewhat antiquated being as 80-column cards, all in capitals with operands to indicate index terms, letters to remain as capitals,

etc. But the programs work beautifully and very inexpensively and we still stick with them. From 1971 the input data was machine-readable which QL accepted to put up and make searchable online as the file YKB. They have only put from 1971 to 1975, even though they have had the data for 1977 for some two years now. I think a problem is that the file is geared to a printed bibliography which is published every two years; therefore the file does not change for a long span of time and is perhaps not suitable to a vendor which supports files which update weekly or monthly. We are hoping to publish the Update to 1979 by the fall and I also plan a cumulative index to the five volumes which we have published.

Q. How exactly would somebody go about accessing these databases? Do you have to subscribe separately?
A. You can access through Tymnet or Datapac and you have to be a subscriber to QL, just as you would have an account with SDC or Lockheed.

Q. Is it available in the United States?
A. I believe so.

Q. Several people have been mentioning about making databases available with CAN/OLE or QL. Can you explain the difference?
A. There are advantages and disadvantages with both. They have a tacit pact that if CAN/OLE puts a database up, QL won't and vice versa. They feel that they should complement each other rather than compete with each other.

Q. Can you search QL for a time basis? Can you say search last year's input?
A. On QL you can restrict your search by date of publication but not by date of input.

There seems to be a little confusion between what is BOREAL and what is BNT (Boreal Northern Titles). BOREAL is our card catalogue in machine-readable form, the cataloguing of our monographs and the analytics that we receive from the Scott Polar Institute. It is compiled and searchable through the SPIRES database management system at the University of Alberta. Boreal Northern Titles is a KWIC author and/or title entry for the documents we receive each month and the newspaper headlines. In terms of analytics this will alert you to a title say in Canadian Journal of Earth Sciences very quickly; as far as the analytic to that article with full cataloguing, we will wait for the Scott Polar card to come and then enter it into the BOREAL file. Northern Titles was never meant to be the definitive bibliography, it is a current awareness service - the first step.

Q. Do you know if QL is available in Europe?
A. As far as I know they haven't gone into that market yet.

Q. Have you considered separating the newspaper citations out of Northern Titles?

A. Yes, I can do that if it is worthwhile. That's what I did to produce the small sample I showed on the Native Press and Whitehorse Star. If people wanted just a newspaper KWIC, this could easily be produced. I am open to suggestions as to what would be useful.

Q. Would you do that or would it be better to do it online from QL?
A. You can go either way. QL won't give you an index, just a listing of citations.

McGill's Northern Studies Library: computer aided cataloguing for a small special library

Carol Bekar, Northern Studies Library, McGill University

History

When, in 1973, McGill established its Centre for Northern Studies and Research to encourage and coordinate northern research within the university, the Arctic Institute of North America (AINA) was still accommodated on the McGill campus. Late in 1975, AINA announced the intention of moving its headquarters and library to Calgary. University and other libraries in and near Montreal had, for some 30 years, tended not to buy obscure or expensive polar works, confident that they would be readily available to the public in AINA's library on the McGill campus.

On learning of AINA's decision to leave Montreal, McGill at once decided to expand the information services of its Centre for Northern Studies and Research, and McGill made available to the Centre the quarters in Purvis Hall that AINA vacated in 1976. Support from McGill University, the provincial and federal governments, and the Montreal offices of some businesses, together with the good will and cooperation of other northern research centres in Quebec and elsewhere and of many individuals demonstrate the importance that many persons and agencies attach to the existence of a northern research library in Montreal.

AINA left behind for the use of the Centre a miscellaneous collection of its duplicates to add to the Centre's own small collection of northern books and journals. McGill made available $10,000 to microfilm selected items in the AINA library, and individuals have lent the library some hundreds of volumes from their personal libraries. The main support for the growing collection has, however, come from Shell Ltd., Federal Commerce and Navigation Ltd., and the Max Bell Memorial Fund. In 1979, McGill's main library recognized the Northern Studies Library (NSL) as one of its branch libraries and assumed some of its costs.

In its acquisitions policy, NSL gives priority to the Quebec-Labrador peninsula, then to northern Canada generally, followed by Alaska and Greenland, Scandinavia and Iceland, the Soviet North, and the south polar regions. The Library acquires all current publications related to its region of high priority. Historical depth and regional breadth in the coverage of northern literature can be achieved only with time.

The only way to build up a first rate research library is through association with and service to a variety of research projects going forward within and based on the growing library. Without such in-house research, there would be only a collection of books. Another aid in collection building comes from persons

at McGill offering northern-oriented courses.

Through the research interests of persons associated with the Centre, the library has already formed important collections related to certain subjects: for example, to bioenvironmental surveys in northern Canada. We have not only the published reports of the Mackenzie Valley Pipeline Inquiry, the Alaska Highway Pipeline Inquiry, and the Royal Commission of the Northern Environment, we also have the complete transcripts of the hearings before these commissions. Many persons associated with the Centre have been involved with the negotiations that led to the James Bay and Northern Quebec Agreement and to the Northeastern Quebec Agreement and with the implementation of these agreements. NSL maintains close relations with the Native organizations of Quebec and elsewhere, and through these associations, the library has built an important collection of documentation related to Native rights and land claims, and to land use and occupancy studies in northern Canada. Another area in which the library is collecting intensively is that of Native education and the training of Native people as teachers. Agreements are going forward with Kativik, the Northern Quebec Inuit School Board for cooperation and exchange of documentation. The identification and acquisition of the extensive report literature produced by private consultants and government agencies requires a time-consuming effort on the part of library staff. NSL's participation in the Information Nord Quebec network permits us to share with the other participating institutions the work entailed in acquiring, processing, and disseminating this important body of literature.

At present, NSL's collection amounts to about 23,000 items, a total that may be broken down roughly into these parts:

6700 monographs

4000 government documents

3000 microforms

3600 pamphlets

5000 reprints

303 serials and newspapers

Following the example of the Scott Polar Research Institute and of several other polar libraries, NSL uses the Universal Decimal Classification (UDC) to subject index its holdings. A numerical classification is especially useful in a library that serves a bilingual clientele and that handles publications in many languages. The library is able to use cataloguing information prepared by other polar libraries and to assist other libraries by sharing its cataloguing.

The Northern Studies Library Automated Cataloguing System

At the suggestion of Québec's Ministère de l'Education, the Centre for Northern Studies and Research has formed a northern information network in cooperation with the four northern research centres in Quebec universities: Centre d'études nordiques, Université Laval; Centre d'ingénierie nordique, Ecole Polytechnique; Centre de recherche du Moyen-Nord, Université de Québec à Chicoutimi. As a first step the four centres formed the Northern Documentation Committee in February 1978 to set policy, define goals, and initiate their implementation. The committee soon decided that one of its first cooperative ventures should be the creation of a union catalogue. Two of the participants, Centre d'ingénierie nordique and Centre de recherche du Moyen-Nord, were already producing machine-readable records. This led the Northern Studies Library, with support from an FCAC grant from the Ministère de l'Education, in May 1978, to commission a program to process its bibliographic records in machine-readable form.

NSL's programs had five goals: to enter and edit the bibliographic references only once; to be able to catalogue by the Universal Decimal Classification (UDC) its monographs, serials, and journal articles; to store its cataloguing information in machine-readable form; to reformat some or all of the data elements to be acceptable to the program that would produce the union catalogue; and to produce 3" x 5" cards for its catalogue and printed information in other formats.

Having defined these goals, NSL staff investigated available systems that might meet them. At first, BADADUQ (Banque de Données à Accès Direct de l'Université du Québec), seemed promising. Staff at the Université du Québec generously helped to enter a small sample of NSL's documents into the system as an experiment. The BADADUQ system, with more time and further work, would probably have served the Northern Studies Library's purposes, but in 1978 there were considerable difficulties of entering data and in obtaining print-outs, together with problems of delay and expense.

Another system investigated was UTLAS (University of Toronto Library Automation Systems). After a brief study, NSL decided against using it because of NSL's unusual requirements, the geographical distance between NSL and UTLAS, and the high cost of using the version of UTLAS available in 1978.

NSL staff asked the McGill Computing Centre about the feasibility and cost of special programs commissioned to meet its requirements. After several meetings with the manager of programming, we felt confident that the Computing Centre could, with the NSL librarian, design and program the software that NSL needed. An analysis of the estimated costs of using the other available systems, and a comparison of these costs with the contract offered by the Computing Centre, led NSL to proceed with

the development of programs that accomodate the library's cataloguing system and produce the outputs that the library and the related activities of the northern information network require. A programmer from the Computing Centre worked with NSL's librarian to design and implement a series of programs that became the Northern Studies Library System (NSLS).

The programs are written in PL/1, and they are run on the University's Amdahl 470/V7 computer, which is equivalent to an IBM 3033. The Centre for Northern Studies and Research purchased two terminals, a CRT (Cathode Ray Tube) and a Decwriter (printer), and they are connected by a dedicated telephone line to the McGill computer. Structured programming techniques are used in the design of the software, and every job has a specific function.

An early decision about the design of the system concerned the operations that should be performed online and those that should be executed offline or in batch mode. These were considered according to the relative merits of cost and efficiency. Some tasks, such as card production, are better suited to batch processing, but others, such as the mode of entering bibliographic references, are more difficult to decide.

Data may be put into machine-readable form by at least two techniques: offline by keypunching 80-column IBM cards or online by typing directly onto disk through a computer terminal. Input by punched cards is cheaper in terms of machine time, but this method requires library staff to prepare detailed coded forms for every catalog entry. The information on the these forms must be correct because the keypunchers belong to a separate organization and have no contact with the library. Any revision of the data is time-consuming and costly. Typing onto disk through a computer terminal is more costly in machine time, but this method permits the data to be edited more easily, it relieves library staff of much of the tedious coding work, and the terminal operator may be a member of the library staff and thus perform other tasks. For these and other reasons, including the fact that the Computing Centre has available an excellent text-editing program, MUSIC (McGill University System for Interactive Computing), the Northern Studies librarian decided to use online entry and editing techniques to create a database in machine-readable form.

The next step in the design of the system was the identification of the required data elements, and our decisions were guided by our judgement of NSL's future needs for information retrieval. What parts of the catalogue record might a user want to search? What parts of the record might the librarian wish to use for the production of catalogues and specialized bibliographies? The system used by the library of the Boreal Institute for Northern Studies was important to us here as a model. Traditional library cataloguing provided content fields, such as author, title, imprint, subject headings, etc. NSL's need for statistics and the inspection of other available systems

suggested the usefulness of fixed fields, such as location, document type, document language, etc. In all we identified 28 fields and assigned four-letter mnemonic tags to them. The design of the input format was considerably influenced by the kind of output that NSL requires. Because the northern information network had decided to use IBM's KWIC (Key-Words-In-Context) program to build its union catalogue, the programmer had to design an input format that permitted the data elements to be reorganized for input into the KWIC program. The major restriction that KWIC imposed on the cataloguing input format was a limit of 60 characters of text per line.

Once the input format had been decided, we designed, tested, and printed work sheets for the cataloguing records. A consecutive number is assigned each document and serves to locate the information about the document in the machine-readable file. The data are keyed onto disk through a computer terminal, and they are temporarily stored online in library-save files. Each file holds the cataloguing records, including UDC references and brief descriptive annotations, for 200 documents; each record has a limit of 3822 characters. It costs NSL an average of $1.40 to process each document. This cost covers machine time for input, editing, and printing of cards, disk storage, and card stock. The cost of staff time has not been computed.

When a file has reached its complement of 200 documents, it is printed, proof-read and corrected, then a new printout is taken. After a final reading, the revised file is prepared for the formatting jobs that lead to its end products. The system is programmed to produce:

- sets of 3" x 5" catalogue cards for each document, sorted for intercalation into the library catalogue.
- a listing of documents arranged by the consecutive number that is assigned for the machine-readable file.
- statistics of the types of documents and the language of documents.
- a magnetic tape containing bibliographic records reformatted for input into the KWIC programs.
- the transfer of data from disk to an archival magnetic tape for storage.
- two back-up magnetic tapes of cataloguing records for protection in the event of system failure in the execution of programs or physical damage to the archival tape.

All jobs, whether batch or online, are submitted from the terminal; each product is executed by a separate job. The sequence of job submission for a desired product is detailed in

the user documentation. In its present form the Northern Studies Library System creates and manipulates data online, it prints files in a variety of formats off line, and it stores records on magnetic tape.

NSL has created a series of programs so that the staff may recall records from the archival tape, write these selected records on disk, revise or delete them, and replace them on the magnetic tape. Because errors may be discovered later, this feature greatly enhances the quality of the database that NSL is creating.

Detailed user documentation and program documentation have been prepared for the system and are continuously updated. The user documentation is an integral part of the system, and it is an indispensable guide to the successful use of NSLS. It contains a step-by-step description of each file used by the programs and each job available on the system. Some of the standard categories of information in the documentation include file characteristics, functions of procedures, input and output, flow diagrams, and messages.

The system, in its present form, satisfactorily performs all the functions required by NSL: it creates machine-readable records; prints and sorts 3" x 5" catalogue cards; and allows NSL to share its information with the other participants in the northern information network. The system has also been structured to provide for the possibility of future information retrieval needs from the database by means of a query language to be designed later. NSL sees as its goals for the near future the production of a printed bibliography of the Quebec-Labrador peninsula, the provision of specialized topical or regional bibliographies on demand, and the possibility of online access to the database.

From small beginnings and in only four years, the Northern Studies Library has grown rapidly and now serves a numerous clientele that requires information of every kind. NSL's continued healthy growth and increasing usefulness will depend on its active participation in research projects executed by members affiliated with the Centre for Northern Studies and Research, on its continued commitment to inter-centre cooperation in the northern information network, and on continued financial support by McGill University and Quebec's Ministère de l'Education.

La Collection Moyen Nord: historique, description et diffusion

Michel Barbeau, Centre de recherche du Moyen Nord

Abstract

In June 1977, the Université du Québec à Chicoutimi started the "Service de documentation sur le Moyen Nord Québécois". The Service is particularly interested in documents which are difficult to obtain (unpublished documents, reports, internal documents from governments or private agencies, theses, etc.) dealing with the Quebec Middle North (between the 49th and 58th parallels approximately). The Middle North in Quebec includes James Bay, Chibougamau-Chapais, Mistassini and Albanel lakes, New Quebec (in part) and the North Shore of the St. Lawrence River, from Baie Comeau to the Labrador frontier.

Also, the collection has the particularity to refer to the NTS (National Topographic System) location. Consequently, one can find information in the database with the NTS code. The collection includes data about inventory of natural resources, description of physical and ecological environment, population, socio-economic analysis and land use planning. During those last three years, the Service contacted many organizations working the Quebec Middle North and obtained nearly 2000 documents. Users have access to the Middle North collection through BADADUQ (BAanque de Données à Accès Direct du réseau "Universités du Québec") and through a card index in which documents are classified by order of acquisition. The Service is also a member of Réseau d'Information Nord Québec/Information North Quebec (réseau I.N.Q.).

Mesdemioselles, Mesdames, Messieurs,

Il me fait plaisir de profiter de la tenu de ce colloque pour vous entretenir du Service de documentation sur le Moyen Nord québécois.

Depuis peu dans le circuit des centres de documentation nordique, le Service n'en a pas moins l'ambition de s'y tailler une place à sa mesure afin de devenir un centre important de référence nordique au Québec.

Hormis sa participation au Réseau d'Information Nord Québec (réseau I.N.Q.) dont nous vous avons entretenu hier, c'est la première fois que nous avons l'occasion de nous projeter sur l'écran national, voire même internationnal, de la documentation nordique.

Mon exposé a pour but de vous donner une bonne idée des ressources dont nous disposons à Chicoutimi et de l'intérêt que nous présentons pour la collectivité de recherche nordique.

Afin de vous donner un aperçu qui soit le plus complet possible, cette présentation comprendra un bref historique du Service suivi d'une description de la collection actuelle et de sa diffusion, pour finalement terminer par un regard sur nos projections pour les années à venir.

Historique

En 1975-76, sous l'égide du "Comité Moyen Nord", le Conseil Régional de Développement, région Saguenay-Lac St-Jean-Chibougamau a monté un fichier de documentation sur le Moyen Nord québécois grâce à des subventions de l'Office de Planification et de Développement du Québec.

Le transfert du fichier et de ses quelques 850 documents à l'Université du Québec à Chicoutimi en mai 1977, a permi de développer de nouvelles bases de fonctionnement et d'assurer la continuité des efforts entrepris jusqu'alors.

Description

La recherche systématique de documents non publiés se rapportant au Moyen Nord québécois assure l'originalité du Service.

En effet, le Service de documentation travaille à rendre accessible à tous les chercheurs intéressés au Moyen Nord québécois, une documentation généralement difficile d'accès portant sur le territoire que nous définissons pour des raisons pratiques, comme la région de la province de Québec comprise entre les 49è et 58è paralleles (voir carte 1 et 2). Ceci couvre le territoire de la Baie James actuellement en développement, des secteurs miniers de Chibougamau-Chapais et Matagami du côté ouest et de Gagnon, Fermont et Schefferville vers l'est, la région des lacs Mistassini et Albanel, les Monts Otish, les secteurs de la fosse du Labrador et du Golfe de Richmond et des autres territoires vers le nord jusqu'à la péninsule de l'Ungava.

Il est à souligner que nous utilisons le code du Système National de Références Cartographiques (National Topographic System) pour classifier la documentation. La recherche d'information peut ainsi s'effectuer par secteur, indépendamment du nom de lieu, de son orthographe ou de ses appellation diverses.

Les documents recherchés comprennent surtout des rapports de recherche, des résultats d'enquête, des comptes-rendus de colloques, des documents à diffusion restreinte d'organismes publics et privés, des textes de conférences et des thèses. Incidemment, au cours de la dernière année, le service a mis l'acccent sur l'acquisition de thèses de second et de troisième cycle. Nous possédons présentement près de 300 thèses en format

variés; microfilms, microfiches, photocopies.

Les sujets répertoriés couvrent plusieurs domaines d'intérêts tels que les inventaires de ressources naturelles, les descriptions de milieux physiques et écologiques, les études d'évolution de population, les analyses socio-économiques et les projets d'aménagement. Cet éventail de documentation permet d'ores et déjà au Service d'être un support important aux divers travaux de recherches et aux commandites du Centre. A titre d'exemple, mentionnons le contrat accordé au C.R.M.N. par l'Office de Planification et de Développement du Québec pour la réalisation d'un document-synthèse sur le Nord québécois. Ce projet, d'une durée de deux (2) ans, permettra de faire un inventaire exhaustif des études et travaux de recherche concernant les aspects bio-physiques et socio-économiques du territoire assimilé au Nouveau-Québec, d'analyser le contenu de ces études et de déterminer les éléments et les espaces qui devront faire désormais l'objet de recherches plus approfondies.

Diffusion

Au chapitre de la diffusion, mentionnons que le Service possède quelques outils lui permettant de faire connaître la collection et de la rendre disponible au plus grand nombre d'intéressés possible.

Le premier support utilisé, et le plus important, et la banque de données de réseau des "Universités du Québec", BADADUQ. Cette banque de donnés à accès direct, propre au réseau U.Q., permet l'interrogation dans tous le réseau ou dans une constituante particulière. La collection Moyen Nord est considérée comme sous-constituante de l'UQAC, ce qui permet de l'isoler du contexte réseau pour consultation en sélectionnant un code d'identification qui nous est propre. BADADUQ peut être accessible aux personnes ou institutions ne faisant pas partie d'une ou l'autre des constituantes des Universités du Québec; un terminal léger relié à une ligne téléphonique courante suffit. Naturellement, des frais d'exploitation seront demandés à l'usager comme pour tout autre banque existante.

En ce qui a trait aux nouvelles acquisitons, le Service publie mensuellement un bulletin signalétique intitulé "C.R.M.N.-Information" qui comprend une liste des périodiques et des documents récemment acquis par le Service.

Depuis sa création, le Service de documentation a mis de l'avant divers projets afin de diversifier sa compétence et les services offerts aux chercheurs; mentionnons principalement la création d'une banque de données informatisée appelée DOMYNO (DOcumentation MoYen NOrd). D'usage interne, DOMYNO permet d'intégrer des références autres que celles recherchées actuellement de façon prioritaire (documents à diffusion restreinte).

Enfin, nous considérons notre participation au Réseau d'Information Nord Québec comme un atout majeur de diffusion du Service. De par son caractère particulier, la collection Moyen Nord est d'un intérêt réel parce que complémentaire aux collections existantes dans autres Centres d'études nordiques participants.

Avant d'aborder les points suivants, j'aimerais vous souligner à titre d'information générale, que le personnel rattaché à temps plein au Service comprend un agent de recherche, responsable de la collection (repérage, acquisition, diffusion) et un personnel de soutient. Un responsable administratif, membre du Centre de recherche du Moyen Nord, supervise de déroulement de activités.

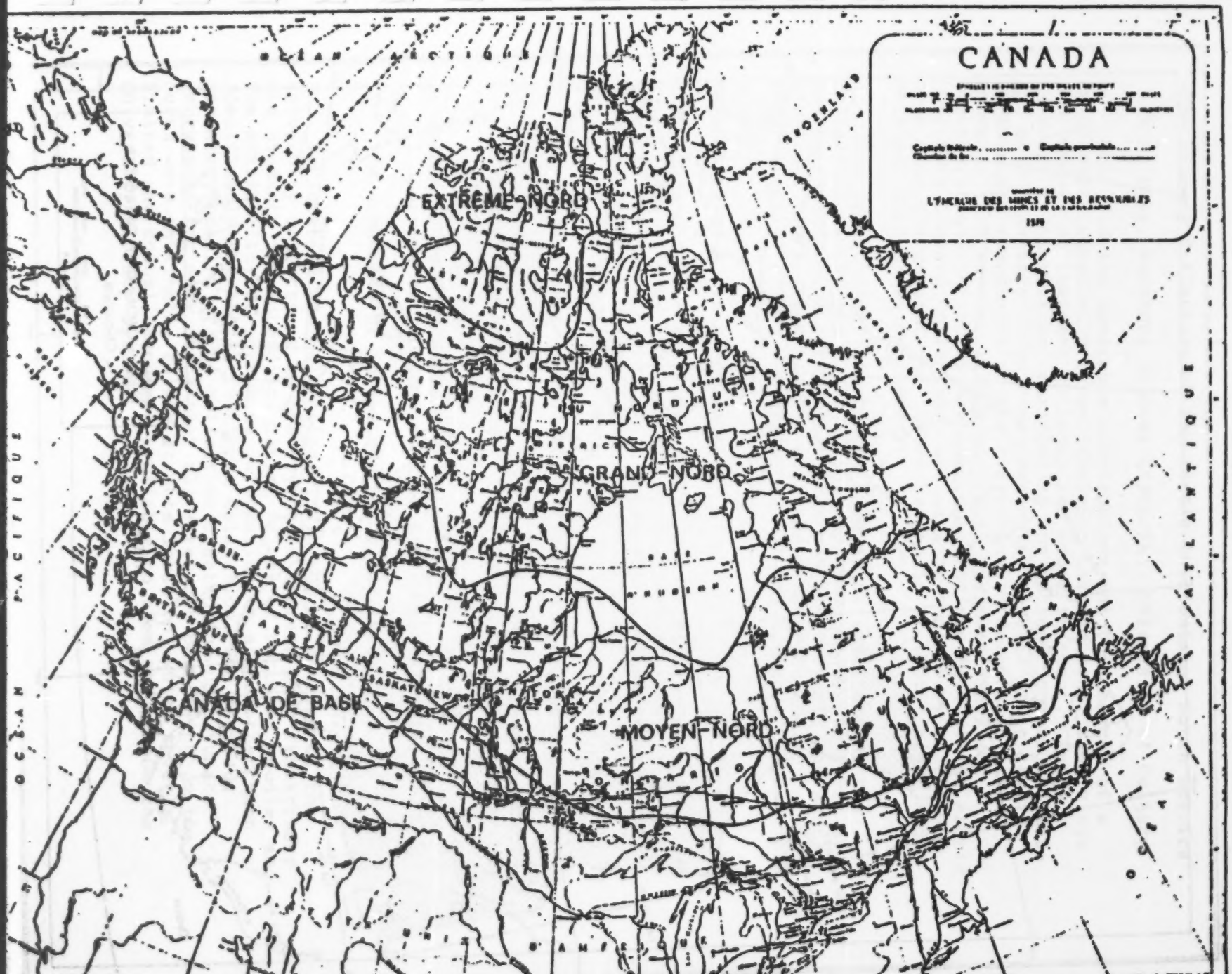
Il est à noter que jusqu'à maintenant les budgets nécessaires aux réalisations du Service font l'objet de subventions à plus de 90% en provenance de fonds privés. Avec le réseau I.N.Q., l'Université du Québec à Chicoutimi fournit le reste de même que le support logistique et les facilités disponibles dans l'institution.

Projections

Le profil de développement à long terme tend à faire du service de documentation du C.R.M.N. un -- sinon le -- centre majeur de renseignements médionordiques au Québec. Je considère personnellement que, même après trois (3) ans d'existance, nous en sommes encore dans une phase d'implantation. La tenue de séminaires et rencontres diverses, tel que ce colloque, est une excellente occasion pour nous "publier".

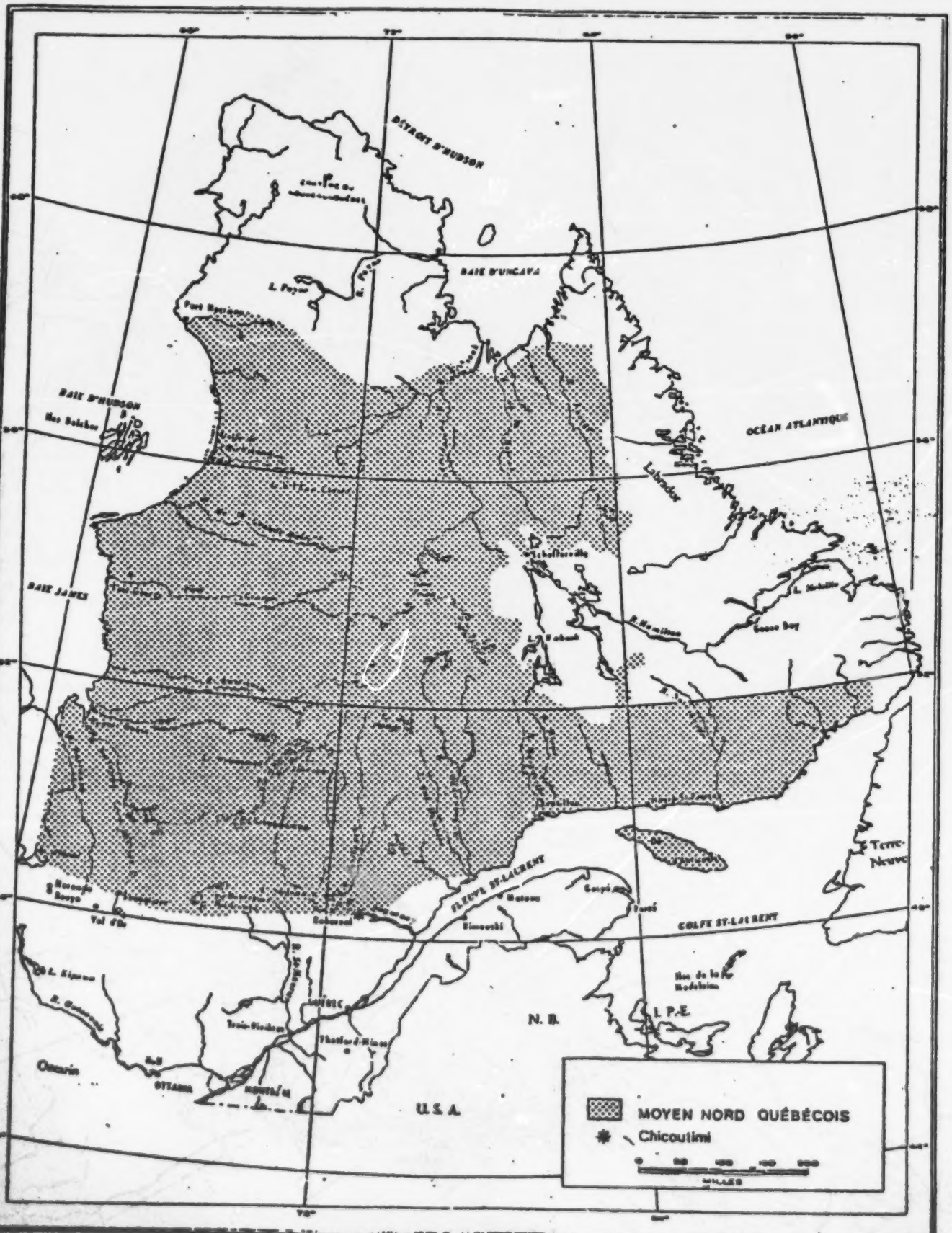
Il n'est pas exclus que, dans un avenir rappoché, le Centre de recherche du Moyen Nord convie les intéressés à une rencontre à Chicoutimi où il sera question d'un des multiples aspects du domaine de l'information nordique.

En terminant, je souhaite une pleine réussite à ce colloque; les échanges que nous aurons au cours de ces quelques jours nous permettront de profiter d'une meilleure connaissance des ressources documentaires existantes pour le bénéfice de nos usagers.


CANADA
EXTRÊME-NORD
GRAND-NORD
MOYEN-NORD
CANADA DE BASE
OCÉAN PACIFIQUE
OCÉAN ATLANTIQUE

Carte 1

Carte 2


DÉTROIT D'HUDSON
BAIE D'UNGAVA
BAIE D'HUDSON
OCÉAN ATLANTIQUE
BAIE JAMES
FLEUVE ST-LAURENT
GOLFE ST-LAURENT
N. B.
I. P.-É.
U.S.A.
MOYEN NORD QUÉBÉCOIS
Chicoutimi

The Library Collection of the Arctic Institute of North America

W.R. Maes, Northern Studies Librarian, University of Calgary

When old and venerable institutions undergo changes of a major sort, especially those involving retrenchment, misgivings and rumours of imminent collapse are bound to occur. Change, however, is inevitable, considering the current economic climate, but also necessary if an organization or service is to remain dynamic and responsive to the ever-changing demands of its mandate. This morning I hope to dispel any misgivings and misunderstandings you might have regarding the fate of the Arctic Institute Library Collection, and express some of my concerns regarding the present and future propescts of institutions and services such as we represent.

The Arctic Institute became a research institute of the University of Calgary as of April 1st, 1979. Under the terms of the agreement which established this new arrangement, the Arctic Institute Library was placed under the management and administration of the University of Calgary Library.

Relocation of A.I.N.A. Collection

In January of this year, the Arctic Institute Collection was moved from its previous location on the 11th floor of the Library Tower to the 2nd floor of the Library Block, where it exists as a discrete physical entity within the Environment-Science-Technology Library. There was a four-fold reason for this move:

1. Increased hours of accessibility for library users.

2. Improvement of reference services to users through input from Environment-Science-Technology and other area reference librarians.

3. Location of the Collection in juxtaposition to other supportive collections such as Environmental Design.

4. The economics of servicing the Collection.

By locating the collection within the mainstream of the university collections we are trying to impress upon researchers and students the interdisciplinary nature of northern studies and the availability of pertinent information in areas other than specifically the Arctic Institute Collection. The previous isolated location of the collection created the unfortunate impression for many users that all materials pertaining to the north were obtainable solely at this location, which severly limited the actual resources available to them throughout the University Library system.

Rare Books

The valuable rare books collection of the Arctic Institute which, due to poor storage conditions while in Montreal and its subsequent relocation to the drier climate of Alberta, had suffered greatly, has been located in a separate collection in the Special Collections area of the University Library, where proper environmental conditions and care exist for its preservation. The University Library has engaged the Parliament Conservation Centre in Burnaby, B.C., to restore the collection. The estimated expenditure for this undertaking will be in the neighbourhood of $250,000. Work consists of de-acidification, reduction of surface and intrinsic stains, removal of deleterious tapes and adhesives, repair to bindings, etc. Ownership labels, dedications and other such additions are naturally being left untouched. The work is being conducted over a long span of time and is being funded through the University Library. It is hoped that A.I.N.A. will be able to provide additional funds for this work in the future.

Catalogue

At present, the A.I.N.A. catalogue consists of a card catalogue, whose format and classification system should be familiar to all who have access to the G.K. Hall catalogue of the A.I.N.A. Collection, and a book catalogue produced by ASTIS for the period April 1, 1978 to March 31, 1979. Because the A.I.N.A. classification system is unique, it presents unnecessarily great costs in both maintenance and in any future attempt to add the catalogues to an online university catalogue system. It was therefore agreed that all future additions to the A.I.N.A. Collection would be catalogued according to L.C. This entails, of course, that the user consult an additional catalogue to the two already in existence. In actuality, if a user was using both the A.I.N.A. Collection and the University's resources he should be forced to consult three different catalogues anyway, so that this really should present no added burden. As soon as the University Library decides on its choice of an online system the A.I.N.A. library holdings could be added as an adjunct to such a system so that one-point access would finally once again be available to the user.

Collection Development

It is the intention that the A.I.N.A. Collection will exist as the core to a northern studies information resource which encompasses the total holdings of the University Library. As such the A.I.N.A. Collection will remain a growing integral unit within the University Library's collection. The province has granted $160,000 annually to the University for the Institute. By agreement one fourth of this amount is used for the library. This year we will be able to spend $10,000 for acquisition of new

materials and continuation of all periodical subscriptions, etc. The University will supplement this figure by adding northern materials to its general collections which the A.I.N.A. budget may not cover, or materials which are pertinent to northern studies but not necessarily suitable for inclusion in a strictly northern collection.

All useful exchanges of publications are being continued and new ones established. Pertinent government documents from Canada, the United States and other countries are also being maintained. The reprint file continues to grow, although alternatives to full cataloguing, for financial reasons, are being investigated. We are presently considering the possibility of increased use of commercially available online systems, as well as new access points such as are provided by some of the libraries and information centres represented here for access to these materials. One other alternative might be use of the University Library's internal online CODOC system. Most importantly the A.I.N.A. collection remains, and will remain, a growing integral source of northern infomration enhanced by the University's collection. Interlibrary loan service is continued and has been expanded through the University Library's interlibrary loan system.

Arctic Science and Technology Information System

ASTIS was perhaps the most severely affected by A.I.N.A. becoming a research institute of the University of Calgary because its cataloguing function for the A.I.N.A. collection was thereby terminated. However, this, in our view, has provided ASTIS the opportunity to become a true database independent of any particular collection or source. It can set its own selection policy, establish new sources of information, enter into cooperative and commercial arrangements, and in general, determine the extent and viability of its services. We cooperate as fully as possible with ASTIS by providing almost immediate access to all our acquisitions, and support them as much as possible in their endeavours. In the interim, ASTIS is providing us a service by making some of our recent acquisitions available to you through the ASTIS Bulletin. In the long run we feel all interests will have been better served by the new arrangements.

Problems

The changes which were forced upon the Arctic Institute through the reality of economics have presented the opportunity to re-examine information needs pertaining to the north, our effectiveness in responding to these needs, and in general, the whole process of information retrieval and dissemination as it relates to the north. We have by no means reached any firm conclusions regarding these matters, but recognize that there are certain external pressures demanding a break in long-established

library traditions and recognize the necessity to do things differently.

A re-examination of our function as an information resource centre and our whole information handling procedures relative to northern studies was warranted by several developments which have taken place in the last few years, in addition to our assumption of the responsibility for the Arctic Institute Collection. Among these we feel we must consider the implications of the following:

1. The north has become the centre of extensive resource exploration and exploitation activity. This new resource environment has created the need for current information of both a general and technical nature which is being produced at great cost and in competition with other resource exploitation entrepreneurs. As a result there is a growing amount of valuable information on the north which is not accessible to the public and northern information centres because of the need of resource companies to maintain a competitive edge and a proper return on investment. In other words, the whole process and purpose of information gathering in the north has changed drastically from the days when intrepid explorers submitted reports to their sponsoring bodies. Northern information has therefor become increasingly inaccessible to northern information centres while the latter have made no real attempt to respond to these changes.

The same economic and social factors which force companies to maintain more control over the information they gather in the north has also resulted in a decline in the support of private institutes and information centres which were formerly hired to gather and organize this information. Gone are the ONR grants and many of the grants for social, economic and political studies on which many of the institutes originally thrived. If we combine this with the predictions of the Science Council of Canada's recent report, University Research in Jeopardy: The Threat of Declining Enrolment, then the picture is gloomy indeed. If this trend continues, and we do not again offer the information community something better than what we offered in the past, then we fear that we might well become an archival repository rather than a northern information centre. Somehow we feel we must regain our position as northern information producers and brokers.

2. Information is big business, and private enterprise is offering an ever-growing array of databases and information services including document delivery service. With the prospect of decreased funding and subsidies in the future for many institutes, many of the bibliographic projects that some of us are engaged in will have to start paying for themselves and we will have to offer competitive services if we are to survive. We will have to be more careful about redundancy and should be looking at more and better ways of cooperating on bibliographic projects. We, for example, cannot afford the luxury of debating the creation of a replacement for Arctic Bibliography for six

years. Private industry can and will fill the voids we choose to create, and our redundancy will be assured.

3. In contradiction to the needs we see for perhaps larger and more competitive northern databases is the need and obligation we see to serve northerners' information needs: "northerners' need for southern information" if you like. We can perhaps unwittingly be included under Louis-Edmund Hamelin's indictment in Canadian Nordicity : "Both government and industry have used scale and complexity as a tool of exclusion" (p.xii). How many Inuit communities have or can use a computer terminal? How many of them have or care to have a set of G.K. Hall catalogues? Do we even know or care what their information needs are as they are struggling to keep abreast of the implications of the massive developments taking place in their native lands? We feel we have an obligation here and certainly hope we will be informed of ways we can help at the Whitehorse leg of this meeting.

4. Although northern studies institutes and information centres in Alberta are not under the same economic pressures as some others, we do see the need for rationalizing collections and the greater sharing of resources and information through whatever channels possible. The formation of INQ is an initiative which is certainly to be applauded and will perhaps persuade the rest of us to participate in similar cooperative ventures. If we are once again to become leaders in the gathering and dissemination of information on the north, then certainly this would appear to be the best way of achieving such a result.

There are many other problems which we envisage in our attempt to become a good northern information centre. It is for this reason that I am here, to learn as much as I can from you and to share with you my ideas as we work together to develop mutual ways of overcoming these problems.

Q. Re exchanges. Do we continue to deal with the Arctic Institute or is the University of Calgary Library assuming this responsibility?
A. The University of Calgary Library has assumed responsibility for exchanges. The only thing we are offering in exchange is Arctic and Information North. Other A.I.N.A. publications or subscriptions to the aforementioned must be purchased through the Arctic Institute directly.

Q. What about existing exchange agreements? Are these discontinued?
A. No. Essentially everything that is in place remains in place.

Q. What northern courses does the University of Calgary support?
A. A northern program is developing slowly. Last year there was a visiting professorship in Northern Studies filled by Dr. Zaslow. During the Spring session we had Dr. Haglund who is head of the Board of Governors of the Arctic Institute, U.S. Corporation, is giving a three-week course on geography of the north. The Arctic

Institute itself is supporting more researchers and building up programs and contracts. The Faculty of Environmental Design at the University also offers courses in ecology, architectural engineering, resource management, etc., which have a focus on northern problems.

Q. Will we be kept aware of new additions to the A.I.N.A. collection?
A. G.K. Hall has filmed the last part of the A.I.N.A. catalogue. This makes the third supplement and it will probably be the last one. Thus one has access to all of the A.I.N.A. holdings up to March 31, 1979. For the future, it all depends what the University Library does in the selection of an online system as to how we can make something like an accessions list available; but that is some way down the road, perhaps in 1982 or thereabouts.

The Northern Content of the Library of the National Museums of Canada

Valerie Monkhouse, National Museums of Canada

The library of the National Museums of Canada is, in conjunction with that of the Geological Survey of Canada, the oldest federal government library in Canada. It is older than Confederation itself as it was formed in 1845. The library was indeed part of the Geological Survey until 1926 but remained closely allied for all practical purposes until 1959 when the Geological Survey moved to larger quarters and the library collection was physically divided. The National Museums library remained in the Victoria Memorial Museum Building until 1972 when it had to vacate its quarters to allow for extensive renovations to the building. For five years, the library suffered from various set-backs such as having the bulk of its collection in dead storage for two years, then having the bulk of its collection in closed stacks under very poor environmental conditions, having its collection located in various unmanned Reading Centres in Ottawa, and finally, a 30% cut in staff.

However, we have survived. We are now, and have been for three years, in fine new quarters. We are working towards centralizing the acquisitions and calatoguing functions and there are plans to develop three more branch libraries from which we will give library service. At present, our technical services are decentralized and there are three branch libraries, and a main library, with no users working in the same building, from which service is given. Parts of the collection are also located in 11 unmanned Reading Centres. We are starting to develop policies and our main thrust this year is to formulate the Policy for the Development of the Collection.

The National Museums of Canada, a Crown Corporation established in 1968 by the National Museums Act, reports to Parliament through the Secretary of State. It is administered by its own Secretariat under the authority of a Board of Trustees.

The National Museums of Canada incorporates in a single administration Canada's four National Museums: the National Gallery of Canada; the National Museum of Man, including the Canadian War Museum; the National Museum of Natural Sciences; and the National Museum of Science and Technology, including the National Aeronautical Collection.

The Secretary-General, Chief Executive Officer of the Corporation, applies the policies established by the Board of Trustees and is responsible to the Board for the overall operation of the Corporation.

Reporting directly to the Secretary-General are the Assistant Secretary-General for National Programmes, responsible for implementing the National Museum Policy; the Comptroller,

responsible for centralized administration, financial and audit services; and the Director of the Policy, Planning and Evaluation Group.

The National Museums Library serves all of these components, except for the National Gallery which has its own library. The National Programmes Branch includes the Canadian Conservation Institute, an institution devoted to restoration and research in the conseravation of artifacts; the National Inventory Programme, which is documenting museum collections in Canada using electronic data processing methods; the International Programme, which arranges for exhibits from across Canada to travel to foreign countries and vice versa; the Mobile Exhibits Programme, which is responsible for three Museumobiles portraying different regions of Canada, including the North, and the Discovery Train; and the Museum Assistance Programmes, which provide technical assistance to institutions for projects in support of the National Museum Policy.

Museum Activities in the North

In 1979-80, the Canadian Conservation Institute provided on site conservation assistance to the Dawson City Museum where severe flooding damaged glass negative collections and an outdoor display of steam engines and mining-related artifacts. A visit was also made to the Yukon Territory's Archives in Whitehorse to advise on the treatment of a flood damaged archival collection. During this summer, a mobile laboratory will be visiting several institutions in the Northwest Territories and the Yukon to provide basic conservation treatment and advise on the care of museum collections and preventative conservation. The Museums Assistance programmes have given grants to the Northern Life Museum and National Exhibition Centre in Fort Smith and are also assisting the Yukon Historical and Museum Association in planning a training programme for museum workers.

However, the major thrust of our activities in the North is undertaken by the National Museum of Man and the National Museum of Natural Sciences in cooperation with other government agencies and scientists of other countries interested in the North. The National Museum of Natural Sciences for instance, has maintained the High Arctic Research Station at Polar Bear Pass on Bathurst Island, Northwest Territories since 1968. The behaviour and ecology of muskoxen have been studied there and, just recently, an exhibit on muskoxen, which will be travelling across Canada was opened in Ottawa. Another very popular exhibit, Arctic Oasis, was developed a few years ago. It was made up of photographs of the North and it has been circulated internationally. Such subjects as the ecology of the lemming, the behaviour and ecology of sea birds have been also studied, in particular the Ivory gull and Ross's gull.

Biological investigations were carried out last year on the east coast of Ellesmere Island to include birds, mammals and plants. These were done in cooperation with archaeological surveys conducted by the Arctic Institute as part of the Polar Continental Shelf Project.

The National Museum of Man participated in the well-known interdisciplinary project in Old Crow Flats, Yukon in 1978-79 but emphasis was given to excavating a site at Brooman Point, Bathurst Island for late Dorset and early Thule culture components. An archaeological survey was also conducted along the shores of McTavish Arm, Great Bear Lake extending the range of previous surveys. The Canadian Ethnology Service research on the Athapaskans focussed on land use, material culture and Athapaskan-Inuit inter-relationships. The ongoing research on Inuit changing patterns of subsistence hunting and fishing continued. There were other research projects on the cultures of the Athapaskan and Inuit peoples such as linguistic and kinship studies.

I have dealt with our activities in the North, especially over the last two years, to give you some indication of the type of information that the library is called upon to provide support to the needs of our users. Of course, there is another aspect to our work because these studies generate published reports. The library makes a concerted effort to acquire not only those publications produced by the National Museums of Canada, such as the Mercury Series and Syllogeus, but also those papers which have been published elsewhere by staff members of the National Museums of Canada.

The National Museums of Canada began publication of articles dealing with the High Arctic with the Canadian Arctic Expedition of 1913-18. From this time onward, more attention was focussed on the North by the Museum staff. This is reflected in the numerous articles contained in the NMC Bulletins which deal with the results of the various expeditions. Diamond Jenness in Anthropology, J. Dewey Soper in Natural Sciences and their colleagues greatly increased the available information on Canada's Northern Regions.

Increased ease of access due to technological advances, e.g. helicopters, as well as the definition of the North as the "New Frontier" is shown in later publications of the Museums. After the reorganization of the Museum into its various components in the late sixties, almost fifty percent of the National Museum of Natural Sciences' Publications in Botany and Publications in Marine Oceanography are concerned with the North. As well, many of the National Museum of Man's Publications in Ethnology and Publications in Archaeology have northern subject matter.

In the seventies, the further reorganization of the Museum's publishing programme has shown a change in emphasis. Although the National Museum of Natural Sciences has continued its work in the

High Arctic, it has published little on the North amounting to a few articles in Syllogeus and articles published by the scientists in commercial journals.

However, the National Museum of Man, through its Mercury Series, has shown a great deal of interest in the High Arctic, and a large majority of those from the Archaeological Survey of Canada deal with this geographic area. Although monetary factors seem to be curtailing this interest at present, co-publishing of monographs, such as Robert McGhee's Canadian Arctic prehistory, with commercial publishers has been an attempt to bring the literature available to the attention of the general public as well as to serious researchers. The interest shown in Dr. R. Morlan's Yukon Refugium Project, the search for traces of early man in Beringia, is an example of some success in this area.

A final area which is often ignored is the material found in popular pamphlet type series such as the Natural History Notebook, the Oracle Series and the Canadian Studies Reports, which bring several subjects, including Arctic ones, into the hands of school children and the general public.

The library collection has two main strengths in its collection of northern materials. These are the presence, in the rare book room, of the accounts of early nineteenth century and some eighteenth century voyages in the Arctic regions, and the accounts of several scientific expeditions of the early twentieth century, particularly the Fifth Thule Expedition of 1921-24. In addition, the Anderson Collection contains several turn-of-the-century works, which while probably not rare, are a good representation of early material not always found in one collection. There are also some interesting comments made by Dr. Anderson in the margins of several of these books.

Otherwise, the library's collection is not unusually extensive. The library is primarily a working collection to meet the needs of the staff of the National Museums of Canada so that it has a good basic collection containing the standard journals, as well as many of the standard works on the anthropology and the flora and fauna of the North. There is also a fairly good collection on Inuit and Athapaskan ethnology.

One area which is receiving attention at present is Inuit art. The Canadian Ethnology Service is attempting to form as complete a collection as possible of catalogues of exhibitions and sales, as well as other publications, which deal with Inuit art. The library benefits as, in most cases, a second copy is also secured for its collection at the same time.

I have tried to give you a flavour of the library collection as it relates to the North and also of the institution which it serves. As we are participating in an extensive cataloguing network (UTLAS), our collection will become more well known and accessible to Canadian libraries and researchers. I believe,

however, that our strength is really in some of the older holdings and in our almost complete collection of the publications of our institution. I have a list of some items in our rare book room which might interest you, a list of expedition reports and lists of our publications about the North.

Northern Interests of the Glenbow-Alberta Institute

Len Gottselig, Glenbow-Alberta Institute

The Glenbow-Alberta Institute is a large and unique institution, at least by western Canadian standards. Most people recognize it as a museum of human history, with a primary emphasis on the history of the Canadian West. As such, our collections and interests in the arctic regions are definitely secondary. However, we do have some signficant history collections of arctic materials, and I'd like to tell you a bit about a few of them.

First of all, I should outline a little of the history of Glenbow. It is a rather unusual museum in many respects, and perhaps one of the most unusual facts about it is the fact that it exists in Calgary. It was started in the mid 1950's by a Calgary lawyer, Eric L. Harvie, who managed to amass a vast fortune through shrewd speculation on mineral rights for land, which eventually turned out to be part of the Leduc oil field. This was the field which put Alberta on the map as a major oil producer. Mr. Harvie, during the years, had acquired an interest in the history of the Canadian West. In 1955, he established the private Glenbow Foundation to purchase books, manuscripts and other archival material relevant to western Canadian history. As more time passed, he found (as in the case with many wealthy collectors), that his interests extended even further. Before long, there were to be found in various warehouses and other old buildings in Calgary, collections of European arms and armour, art and artifacts from Africa, Polynesia, New Guinea, and South America, to mention only a few.

In 1967, as a centennial gift, Mr. Harvie donated the entire collection of the Glenbow Foundation to the people of Alberta. A special act of the Alberta Legislature established the Glenbow-Alberta Institute (our current present official title). Along with all the collections, which were by this time large and in many respects quite bewildering, Mr. Harvie donated a sum of $5 million, which was matched by a similar grant from the Alberta government, to establish an endowment fund of $10 million which was to provide operating income for the new Institute. As anyone who lives on a fixed income might realize, inflation has cut into this income severely, and the Glenbow-Alberta Institute is no longer as "flush" as it once was in the old days as a private foundation. Within the past five years, we have had to depend increasingly on direct grants from the provincial government, as well as significant grants from the federal government - primarily through various programs of the National Museums Corporation and the Secretary of State department.

Glenbow today is a large complex. We reside in an 8-storey gray monolith in downtown Calgary - contributing to the concrete jungle that is developing there. Museum and art gallery space amounts to some 80,000 sq. ft. within the building. The library

and Archives alone occupy an entire floor (approximately 30,000 sq. ft.), and these two departments combined have a permanent staff of 20 people - half in the archives, half in the library. This includes two conservators who work in the bindery and paper conservation lab which the library maintains.

The Library and Archives are an extremely important component of the entire Institute. In spite of the drastic expansion of the scope of Mr. Harvie's collecting interests in the latter years of the Glenbow Foundation, the library and archives were left free to quietly develop excellent research collections on the history of the Canadian West. The present library collection consists of approximately 50,000 volumes. The archives holds several thousand linear feet of manuscripts, and an estimated 200,000 photographs. These collections are open to all members of the public without restriction. Our primary users have tended to be university students and faculty, however increasingly in recent years, we have welcomed amateur genealogists (as most North American archives know, the popular television production of Roots has precipitated a deluge of family tree researchers), and numerous people working on local histories of southern Alberta communities.

Although the primary interest is the history of western Canada (this is broadly defined as the area between Thunder Bay and the B.C. interior), our interests also extend to adjacent areas of the American West, and the Canadian Arctic (primarily the western Arctic, west of Hudson's Bay). Early in the Library's history, Mr. Harvie purchased a collection from Vilhjalmur Stefansson. I have looked at some of the correspondence concerning that transaction and it is quite fascinating. Apparently Stefansson was a shrewd collector and a speculator of some note in the rare book market. Although he sold his main collection to Dartmouth College, he had in the meantime amassed duplicate collections. Included in the collection purchased by Glenbow were many first editions of classics on Arctic exploration. This collection, along with other purchases Mr. Harvie and the Institute have since made (rare books, maps, etc.) have produced in Glenbow, a fairly reputable historical collection on the Canadian North. Our interest in the history of the North continues and we continue trying to develop the collection within our means.

Within the area of modern literature, we have found it necessary to become much more restricted in our acquisitions in recent years. First, our interest in the Arctic regions is secondary to our interest in Western Canada below the 60th parallel, and as the production of literature relevant to our main interest has expanded, we have been forced to restrict our acquisition of Arctic material for budgetary reasons. Secondly, with the advent of other research collections such as the Boreal Institute, and the Arctic Institute, there is no longer a need for Glenbow to be extremely active in this area. We have strictly avoided any attempt to collect modern scientific and technical

arctic literature since the arctic and northern research institutions are equipped to do it so much better than we. We do, however, have a strong interest in literature concerning the native peoples of the Canadian West and North. This is one of our primary collection targets, and one in which we have considerable strength.

I should point out that although the Library and Archives are usually considered as one by many people, they are actually two separate departments. Within Glenbow's Archives itself there are scattered examples of important manuscripts relevant to the Arctic. For example, we have the journals of Sir Erasmus Ommaney, kept during his involvement with the search for Franklin (1850 to 1860). There are also within the archives collection, a number of manuscript items from the North-West Mounted Police patrolmen in arctic regions (the Mounted Police being another subject in which the library and archives have specialized). The most significant collection of arctic interest within the archives is probably the photographic collection produced by the Lomen Brothers of Nome, Alaska in early 1900's.

I can't really say too much more about the Library and Archives at this point. Our collections are historical, and historians, being the antediluvian sorts they are, we have not reached the age of the computer yet. It will be some time - I think - before the machine age arrives with us. We have seen initial phases of computerization of collection information come to Glenbow, in the form of the National Inventory Program of the National Museums. We now have a terminal and operators within the building, and the ultimate plan is to record information about all artifacts in the vast collections. However, that particular project alone may well take 20 to 30 years.

There are, within other departments of the Museum, a few significant arctic collections. Within our Cultural History department, for example, there are a number of interesting artifacts left on an arctic island by the McClintock expedition in 1862, on their search for Franklin. During the late '60's a Panarctic crew came upon a large wooden cart, an assortment of well-preserved tin ration cans, etc. The company subsequently alerted Glenbow and flew up some of our staff to bring back the cart, several cans of pemmican, sled runners and a number of other artifacts which are now on display in the museum.

Within the Art department, there are interesting examples of northern material. Probably the most significant ones are a half dozen large and magnificent oil paintings by the artist William Bradford (all documenting arctic expeditions). There is also a moderate sized (150-200 copies) but important collection of Eskimo soapstone and whalebone carvings, as well as later Eskimo prints. Inuit art is another area in which Glenbow maintains very strong interest, and these collections will grow.

Our Ethnology department holds more than 900 artifacts from various indigenous peoples of the Arctic (primarily of the western Arctic). These range in quality from first class archaeological and ethnographical specimens to much more recent items inspired by the tourist trade.

Within Glenbow's collections as a whole, there are numerous examples of things which are there as much by accident as by conscious design, something which is true of most large museum collections. There are many areas within the collections (including some arctic materials) which we do not intend to develop further. Like many large museums, we are now facing the prospect of de-accessioning artifacts in areas which are not of high priority to us, with the possibility of exchanging them for materials within our priorities. This will have to be an on-going process.

Q. Do you loan books from your library?
A. Yes, we do restrict rare books, however we are fairly willing to lend to responsible persons. I might mention that the materials in the main collection of our library are published in the G.K. Hall catalogue of our collection. It does not include all of the library's holdings.

The Library Collection of the Institute of Sedimentary and Petroleum Geology

Marian Jones, Institute of Sedimentary and Petroleum Geology

Before I tell you about the library I should say a few words about the Geological Survey of Canada, of which we are a division, and where we fit into the Department of Energy, Mines and Resources.

One of the basic tasks of E.M.R. is the formulation of energy and mineral resource policy, to ensure their efficient use and conservation, by and for the people of Canada. The I.S.P.G., as a part of this department, is the key source of comprehensive and up-to-date information on the energy resources of western and northern Canada. The sedimentary basins of western and arctic Canada contain almost all of the oil and natural gas resources of the country and most of the coal, although offshore prospects off the east coast are now yielding some promising results. These areas also contain deposits of uranium and other minerals, including large reserves of sulphur and potash. And they also have large deposits of sand and gravel which are of increasing importance in the construction of oil and gas pipelines.

The I.S.P.G. grew out of the Calgary office of the Geological Survey, which was opened in 1960 with a staff of 3 people. The Institute itself was opened in 1967 on a site adjacent to the University of Calgary campus. This site and the land adjacent, now called Calgary Research Park, is also the location of other institutes, including the Alberta Energy Resources Conservation Board's core storage facility, Petro Canada's new energy institute and I believe some major oil companies have plans to build research institutes in this area shortly.

The I.S.P.G. has a staff of about 65 research scientists, and about 100 support staff, and we also house staff from the National Energy Board and E.M.R.'s Canmet Branch. These scientists are all experts in their field, and the Survey's reputation is such that we have renowned researchers from all over the world visiting us to do research and to exchange information with our staff. Last year, for example, we had three delegations from the People's Republic of China. The results of our research are made available to the public.

We also house some of the finest laboratories in the country, as well as core examination and storage facilities, photographic and hydrographic units, and the library.

The Institute is the focal point where other agencies and private companies, and other scientists can get information on the geology of the area we are responsible for. It is the clearinghouse for the great mass of data we receive from our own field work and from outside sources such as research companies.

But most importantly, the department uses the information it receives from the Institute in the formulation of the resource management and energy policies of the federal government. The Institute staff spend most of the summer doing field studies, nowadays mostly large aircraft supported operations in the arctic and northern Rockies, with the object of interpreting the geology of these regions in order to evaluate better their mineral potential and hopefully to result in more efficient mineral exploration. These studies often take two or more years to complete and the results are made available to the public, preliminary results often in Open File form and later in published maps and reports. All this field work is supported by the laboratory work such as the geochemical analysis, paleontological and petrographic studies and so on.

We also provide other services to the public such as core and sample examination rooms, where they may examine core and samples from oil fields under government jurisdiction, in the Yukon, N.W.T., the arctic islands and now the continental shelf, and we have a sales outlet where maps and publications may be purchased.

I think the library is certainly the most comprehensive geological research library in western Canada, and covers stratigraphy, paleontology, fuel reserves and also of course the general geology of Canada and most other countries. The emphasis in our library is on the arctic and western Canada, but because we are a depository library for the publications for other government agencies whose publications we receive in exchange for those of the Geological Survey of Canada, we do have world wide coverage.

Today the collection numbers about 80,000 volumes and we subscribe to about 550 journals and periodicals. We also have a major geological map collection with world wide coverage and, because of our interest in the arctic, we have an historical collection of material on the Canadian arctic and other northern countries. The nucleus of this collection was supplied by the purchase, in 1977, of the library of Dr. Nicholas Polunin, the famous botanist and contains many rare and valuable works. We plan to maintain it as a separate entity. However, we are grossly understaffed, as we have four people only, two professionals, and two clericals, which is barely enough to serve the needs of the staff of the Institute. Because we have this unique collection, the library is widely used by local resource people, the staff and students of the University of Calgary and although it seems unlikely during these times of government restraint that we will get more staff, we do our best to provide basic services to the public. We do provide limited interlibrary loans and photocopies on request. We have no public photocoping facilities, mainly because we have no means of charging, but we have a good arrangement with a local company to make copies of requested material and be responsible for all mailing deliveries and billing.

The public may use library material in the reading room and have access to the card catalogue and reference collection, but not to the stacks. We assist people to use the catalogue and the reference material and fetch anything they wish to consult from the stacks. Our serial holdings are recorded in the Union List of Scientific Serials and we publish a monthly accessions list, which is available to anyone requesting it. Also, the G.S.C. publishes a monthly circular which lists all new publication of the Survey, including open files, and this is available to anyone who wants to be on the mailing list.

Because much of the literature we receive is in a foreign language, we also get a great deal of material translated by the Translations Bureau of the Department of the Secretary of State. We have a great deal of Russian and now Chinese literature in translation, and copies of these translations are available for the cost of photocopying.

Perhaps I should say something about our origins, past problems and future prospects. In view of today's problems, financial and otherwise, facing major libraries today, I am happy to report something of a success story. We started with absolutely nothing in 1966. I remember being handed a few sheets of foolscap on the day I arrived on which were listed the entire contents of the library. So we have come a fair distance in 14 years. I think it is something of a miracle for a government library! But we were lucky in that we started in the right place at the right time, and Dr. Don Stott, our Director saw that we were well funded to build up the collection. We do have one great advantage, I think, in that most of the research into Canada's energy reserves and resources is done by the I.S.P.G. and it obviously will be necessary to develop our collection in Calgary to support the Survey's growing research programs in these fields. The real problem in government libraries is that changes in governments make it impossible to anticipate policies, and it is very difficult to assess priorities as these change. So we always face the problem of acquiring expensive material in very specific fields which may have a very short life. We are at the moment anticipating some major changes in the structure of the Department of Energy, Mines and Resources and we are also re-examining our relationship with the main library in Ottawa, as well as trying to find some way of coordinating development with other departmental libraries and other federal government libraries. However, we are hopeful that for the next few years we shall have major research programs for which the support of the library will be essential, and we expect to grow in strength for some time yet.

The Library of the Polar Gas Project

Jennifer Wentworth, Polar Gas.

I'll begin with a brief outline of the history of Polar Gas, for those of you who may not be familiar with what Polar Gas is, and then I'll explain the rationale for the establishment of the library. This will be followed by an examination of two of the main functions of the library, collection development and reference and bibliographic services.

Polar Gas was formed in 1972 to find the best means of transporting natural gas discovered in Canada's arctic islands to southern markets and to do so in a manner that would be economically, environmentally and socially acceptable to Canadians. Five participants sponsor Polar Gas - Trans Canada Pipelines, Petro-Canada, Panarctic Oils, Tenneco Oil of Canada and Ontario Energy Corporation. In December 1977 Polar Gas filed an application with the National Energy Board and the Federal Department of Indian Affairs and Northern Development to construct a pipeline along the west side of Hudson's Bay to Longlac in northwestern Ontario. Two weeks ago, Polar Gas informed the National Energy Board of its intention to withdraw this application. Research is now being done on four alternative routes, collectively they are referred to as the Y-line.

Polar Gas library was formed in June 1975, principally to organize the Polar Gas reports. Since then the role of the library has expanded to include the full range of library services. One of its main functions is developing the collection, which reflects the wide range needs of the staff. Information on energy forms a substantial part of it. For example, we have to keep up-to-date with the latest estimates of oil and gas reserves, uses of renewable energy resources and energy policies of various government bodies. Information on the environment is another area of concern. We have to know what kinds of wildlife make their habitat in the vicinity of a proposed route and potential effects construction of a pipeline would have on the vegetation of the area. Social and economic concerns are a vital and consuming interest. Surveys of communities in northern Canada are a well used part of this collection, as is data on land use by inhabitants of communities near a proposed route. The collection contains material on the oil and gas industry in Canada, as well as information of a more technical nature. The engineering department requires data on such topics as ice, permafrost, pipeline construction, pipeline design, transportation for logistics purposes and the physiography of Canada. Transcripts and exhibits from relevant hearings are also collected. We have almost a complete set of transcripts and exhibits from the National Energy Board's hearings on the construction of a pipeline down the Mackenzie Valley.

Perhaps the most important part of the collection, is the Polar Gas reports. Some 300 reports have been prepared by

consultants for Polar Gas, covering technical, environmental and socio-economic matters. The environmental and socio-economic reports, some 90 in number, are available to the public through the Canada Institute for Scientific and Technical Information in Ottawa. I should also point out that these reports are made available to communities along the route, to the communities that request them. A full set is not sent out to every community, because of course not every report pertains to every community. Reports are made available to all Native associations and industries within the communities along the line if they want them. Our environmental and community program planning staff makes an effort to visit every community. They are visiting communities in the Western Arctic now - Coppermine, Tuktoyaktuk, Holman - to hold conferences and talk to the associations. Surveys were done earlier this year and the follow-up will be done in the fall on the migration of the caribou herd in the Coronation Gulf area.

Finally, the library has an annual report file and a speech file which together provide current and historical industry information. The annual report file concentrates on corporations which have an interest in the arctic islands. Now that the proposed route has changed to northwestern Canada, we also have a fairly comprehensive collection of annual reports of corporations operating in the northwestern arctic. The speech file contains speeches by industry and government representatives giving an insight into activities in the oil and gas industry, especially in connection with developments in the arctic and into energy policies of various governments. As you can see the library collection has evolved as a direct result of staff requirements. When the proposed pipeline route was switched from the eastern arctic to the western arctic, the library collection followed in the same direction.

Reference and bibliographic services represent another prime function of the library. Reference questions come to the library in a variety of shapes and sizes. An engineer might want to know the location of river crossings for the proposed arctic pipeline, while an environmentalist has to find a map and accompanying description of the boundaries of Treaty Number 8. The energy studies section requires information on gas fields in the arctic islands and now in the Mackenzie Delta and Beaufort Sea as well. Queries on the metric system are popular since two weeks ago we had to start doing everything in metric. Bibliographies are compiled on an as needs basis in response to specific requests. The economic impact of energy development, and Canadian import and export of energy are both topics which have been studied. A variety of sources are relied on when searching for information, with in-house materials supplying only part of the answer. Outside resources are utilized; for example, the network of special libraries in the metropolitan Toronto area offer a wide range of resources. The Metropolitan Toronto Public Library system has a bibliographic service which allows identification of titles in the 75 public libraries in the city and five

surrounding boroughs. The central public library consists of sixteen specialized subject collections, including science and technology, Canadian history, business and social sciences. Another valuable resource is the University of Toronto Library, generally regarded as one of the foremost research collections in North America. The University of Toronto library system is composed of two main libraries, one for humanities and social sciences, the other for science and technology, plus some 65 specialized collections.

The Polar Gas library thus is a blend of resources related to both research and industry. The collection is dictated by a combination of factors, including location of pipeline routes and alternatives, the Canadian energy situation and industrial development. If you have any questions I'll be pleased to answer them.

Q. Is there any cost to using the outside resources?
A. Well some of the services do cost. The Metropolitan Toronto Central Library charges $5 for xerox copy of an article up to 20 pages. I go there myself a lot. The collection is strictly for reference, you cannot take anything out, so you know that what you need will be there.

Q. Do you charge for Polar Gas reports?
A. No, we don't charge the communities for them. I should have also mentioned that we have sent copies of the application to several libraries across Canada; it is in the Boreal Institute.

Q. Re distributing reports to other northern libraries.
A. The reports are very site specific. They are offered to the communities, the northerners who are actually being studied. We write to them and ask if they would like copies and most of them say no. They will ask for some of the socio-economic ones. But even in Ontario and Manitoba, they are not that interested. To answer Carol's question - it is possible that someday that policy will change. The researchers that do them by the way are encouraged to publish their results as summary papers in journals, there was one recently in Arctic and these are almost easier to use.

Q. Can reports be borrowed from you by inter-library loan?
A. On interlibrary loan? Well - the Polar Gas library is really for the staff. The public can come in and look, not many do.

Editor's note: Questions posed were inaudible on the tape and have been improvised from the answers given.

The Insititute for Northern Studies at the University of Saskatchewan

Rose Gyorgy, Institute for Northern Studies

An inexperienced writer once asked an expert whether a good beginning and a good ending made a good paper. Yes, was the answer, provided they are close enough to one another. I will try to follow this advice and not dwell too long on aspects of our institution that are common to most establishments of this nature but rather on the unique features of the Institute for Northern Studies of the University of Saskatchewan.

First a brief description. Founded in 1960, the Institute will celebrate its 20th anniversary this coming October.[1] It will coincide with the official opening of our new premises, since we moved last winter from our cramped quarters at Kirk Hall to the recently completed John G. Diefenbaker Centre. We are very proud of our new building which has the most beautiful location on the Campus, overlooking the South Saskatchewan River and the skyline of our growing city. Due to Mr. Diefenbaker's deep interest and unwavering faith in the development of the North, the Board of Governors deemed it appropriate to allocate the long overdue new home of the Institute to the new building erected in his honour.

The Institute is an interdisciplinary research centre concerned primarily with Northern Saskatchewan and the Canadian Arctic, with a strong emphasis on their socio-economic and environmental aspects. Of the Institute's varied activities (e.g. the Arctic Research and Training Centre in Rankin Inlet, N.W.T., and several contractual applied research projects in various fields) I feel that its strong publishing program might be of primary interest to librarians.

The bi-annually published scholarly Musk-Ox journal deals with a wide variety of subjects concerning the Arctic and contains reviews of recent books pertaining to the circumpolar world. Started in 1967 its reputation is steadily growing, and currently it has subscribers in 27 countries.[2] News from the Canadian North is another periodical publication, consisting of newspaper clippings from the Edmonton Journal and the Saskatoon Star Phoenix. Published monthly it provides up-to-date information on the latest northern developments. Some valuable reference works issued by the Institute are Settlements of Northern Saskatchewan, the Directory of Educational Services for Northern Saskatchewan, the Directory of Social Services for

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[1] Since the Colloquy and the presentation of this paper, the Institute for Northern Studies has been disbanded by the University of Saskatchewan. See Northern Libraries Bulletin, No.26, March 1982, p.3.

[2] Despite the demise of the Institute, Musk-Ox will continue to be published. In fact, most programs have been transferred to other units in the University.

Northern Saskatchewan, and the Directory of Financial Services for Northern Saskatchewan. These materials are in great demand and in constant use by students and researchers.

This list is far from complete but I must not omit to mention one of our recent outstanding publications, My Life Among the Eskimos; the Baffinland Journals of Bernhard Adolph Hantzsch, 1909-11, translated and edited by Dr. Leslie Neatby, the eminent arctic scholar who is the Institute's special historical associate.

The Library itself reflects the interdisciplinary nature of the work done at the Institute. It is a small but rapidly growing collection housing approximately 12,000 volumes of monographs, pamphlets, theses, research reports and reprints, over 400 titles of serials from many countries ranging from Japan to Iceland, from Italy to the USSR. Our collection of black and white photographs and of 5,390 colour slides was taken mostly by professors and research staff on field trips to Rankin Inlet and other northern points. This slide collection with its conceptual index permitting easy access to the wide range of subjects it encompasses can be a valuable tool for a civil engineer interested, say, in northern roads and transportation, or for a zoologist studying the antlers of the caribou.

The Institute's chief areas of interest: land use, resources development in Northern Saskatchewan and in the Arctic, ecological issues, and human problems of the North play an important part in the book selection and acquisition policy of the Library. Due to the recent resources development boom in Northern Saskatchewan we have a strong collection of works on oil and uranium exploration. We have most of the important documents of the Cluff Lake Board of Inquiry and a complete set of the reports, interim and final, of the Churchill River Study, as well as its circulars, bulletins, and miscellaneous pamphlets. The Institute's involvement with the Northern Population Committee, sponsored by the Department of Indian and Northern Affairs, led to a very intensive program of population research, resulting in the five reports of the Northern Population Series. Each assesses a certain type of data source for northern population statistics. The socio-economic and legal status of the people of the North, the Indians and the Inuit, has always been one of the chief concerns of the Institute.

The books are catalogued and processed in the main University Library. They are classified according to the Library of Congress classification system. Recently I started compiling a list of our new acquisitions for distribution among our researchers, interested teaching staff, and other users of the Library.

The Library serves primarily the research staff of the Institute, professors and students of other departments engaged in investigations connected with the North, and is open to outside researchers and interested members of the public.

The Northern Pipeline Agency

Ellen Hughes, Northern Pipeline Agency.

The Northern Pipeline Agency is a Canadian federal regulatory body created by Parliament in April 1978 to oversee the planning and construction of the Alaska Highway gas pipeline. The first phase of the 7,000 kilometer pipeline project is a large diameter pipeline that will initially transport Alaska natural gas across the Yukon, Alberta, B.C. and Saskatchewan to the lower 48 States. The second phase of the project consists of the Dempster lateral connection to carry Canadian gas from the Mackenzie Delta, Beaufort Sea area to Canadian consumers if and when the lateral proceeds. Rather than just another level of regulatory approval the Agency is designed to function as a single regulatory window to streamline and expedite the approval process. This single window concept allows for the many federal acts, which regulate the construction of the pipeline in Canada, to be administered by a single regulatory authority - the Northern Pipeline Agency. The powers of the National Energy Board are held within the Northern Pipeline Agency by the Designated Officer.

The Agency is unique in that though we are a regulatory body, and a creation of Parliament, the Agency is classified as a special employer. The majority of our costs are recovered from the project's sponsoring company, Foothills Pipe Lines (Yukon) Ltd. The sunset nature of the Northern Pipeline Act provides for the termination of the agency within one year following the opening of the pipeline.

We are a small operation and plan to remain so. With four offices in Calgary, Ottawa, Whitehorse and Vancouver, our staff now totals 78, with the provision for increase to 200 if required at the peak of pipeline construction. Our operational headquarters is in Calgary with a staff of 55 and our policy headquarters is located in Ottawa with a staff of 20. Agency staff have developed socio-economic and environmental terms and conditions required of the project company, Foothills Pipe Lines. As well the Agency held public hearings in the Yukon and the northeastern region of B.C. in 1979 to hear comments on these terms and conditions. It is expected that the report of the Chairman of the northeastern B.C. hearings, Mr. Winston Mair, will be available within the next two weeks.

As our office is small, our library is correspondingly small. It began in the Ottawa office in 1978, when the Mackenzie Valley Pipeline Inquiry, the Berger Inquiry, was disbanded. Their main library collection went to Northern Pipelines Branch of Indian Affairs and Northern Development. Duplicates from that collection were brought to the Agency in Ottawa by our first librarian. It was later decided to move the main Agency library and records centre to Calgary. When I joined the Agency in the fall of 1973, the Calgary library consisted of 60 boxes in a

corner of our main office. At that time the collection was made up of the Berger material, which deals mainly with the Mackenzie Valley Pipeline, and National Energy Board exhibits and public documents from the omnibus northern pipeline hearings held in 1976 and 1977.

In the past 21 months, the library has grown substantially, with major additions to our collection of government documents and industry material. However, we do not plan to expand significantly, at least not until full scale construction of the pipeline commences. Our library now holds approximately 2,000 volumes, of which about 60% are federal, Canadian, American, provincial and territorial government documents. A large proportion of these documents are from the National Energy Board, the Department of Environment and the Department of Indian Affairs and Northern Development. An additional 30% consists of reports issued by the Foothills group of companies, their consultants and other pipeline companies in Canada and the United States. The remaining 10% is made up of general monographs and reference material. The library subscribes to over 100 periodicals, many of which are petroleum and biological journals, as well as a large number of northern newspapers.

As I indicated earlier, although our library is small, we are trying to provide the same services as other special libraries. Ongoing responsibilities include processing a growing number of interlibrary loans for our staff, interlibrary loan requests from other libraries, and reference services. This summer we have undertaken a major project to completely catalogue all our material. Up to this time the material was only roughly catalogued, owing to the small staff, which consists of myself and a library and records assistant. The Agency staff, many of whom are engineers in biometrics and environmental socio-economics people, aims to keep current with what literature is being published in their respective fields. We are involved on a small scale with helping to keep these people up to date with the production of our weekly bulletin, which includes table of contents pages of relevant periodicals, abstracts and a recent acquisitions list. Like other libraries, we are always hoping to add other services which could aid Agency staff in finding the information they seek. We plan to do our own online literature searches rather than having them done by other libraries. An annotated bibliography on northern wildlife was produced by a researcher in our environmental department with our assistance. We hope this is just the beginning.

Q. Is that bibliography available?
A. Yes, it will be to anyone who would like a copy, it is just in the production stage right now.
Q. How will we know when it is available?
A. Everyone who had assisted our researcher in producing the bibliography will automatically receive a copy. Anyone else who would like a copy please let me know. It's entitled Northern Wildlife as related to linear projects: pipelines, road etc.

The Yellowknife Court Library

Deborah Goldberg , Yellowknife Court Library

The Court Library in Yellowknife is a recently established law library, serving the needs of the judicial system of the Northwest Territories. It is quite rapidly becoming a network of small satellite libraries, as we establish collections in some of the communities where the court parties regularly travel on circuit.

The Northwest Territories covers approximately one-third of the land mass of Canada, although the total population is only 45,000 people, approximately one-third each, Indian, Inuit, and white. Settlements are widely scattered, and often quite small. The only way into most of these communities is by plane, and court parties often charter flights if no commercial ones are available. Because of the high cost of moving court parties around the country, it is the custom for several communities within a logical geographic pattern, to be visited on a single trip, which may last anywhere from a few days to several weeks.

There are only two permanent court house facilities, one in Yellowknife, and one in Hay River, on the south shore of Great Slave Lake, both built within the past few years. In other communities, such as Inuvik (in the north), Fort Simpson (to the west), Fort Smith (to the south), and Frobisher Bay (in the east), there is a permanent facility in a government building set aside to function as a court house, while in still others, a makeshift courtroom may be set up at the local school or town hall.

It was decided that in order to spare the court parties and the lawyers on circuit the quite literal burden of carrying with them every book they might need in their work, that their interests would be better served if we set up small basic collections of the most frequently consulted materials in the four communities I have just mentioned. The Yellowknife collection is the main one in the system, and the one in Hay River is already quite well established. We do all the ordering, receiving, and shipping from Yellowknife, as there is no one in the branch libraries to process material, and I have had to find one person in each town to receive the boxes of books we send out, and take them to the court house, where the court clerk will unpack them when he or she arrives in town. In most cases, these libraries are merely bookcases in the room which functions as the judge's office. I have visited the communities of Hay River, Fort Smith, Fort Simpson, and Inuvik, to organize the books already there, and plan to return a few times a year, if possible, as well as travel to Frobisher Bay. At the present time, there is no catalogue in any of the satellite libraries, but we hope within the next few months, to produce a list of each collection for distribution to the individual branches, as well as to the law firms in the N.W.T. We do have a record in Yellowknife of which

library has a particular book and which books are in the individual libraries.

The Yellowknife library is considerably larger, but before discussing its physical attributes, I would like to explain the types of material that comprise the collection.

Tradition has dictated that judges try, whenever possible, to follow the decisions of previous judges in similar cases. For law libraries, this means that there is virtually no such thing as obsolete material, and the availability of current material is crucial.

This common law tradition dictates that judges' decisions in cases be made available to practising lawyers and other judges, and has given rise to the "world of legal publishing". In Canada, this means that there are five or six large publshing companies which produce, on a regular basis, volumes of the decisions of various judges in their locale. These are known as casebooks, or law reports, and are issued as serial publications. Each series may cover either a particular geographical area, or legal subject. Because the publishers cover different cases, and operate on different schedules, and because their styles vary, law libraries are obligated to purchase as many of these services as their jurisdictions require and their budgets allow. Current decisions are vital, and ancient ones are valuable, therefore the range of casebooks necessary becomes limitless. New cases are reported at such a rate, that my latest estimates of natural yearly maintenance show that approximately 42 shelves of books will be added to our collection each year in subscriptions alone. This does not include the purchase of textbooks or sets of materials, such as encyclopedias or digests.

In addition to these report series, the collection also contains sets of the statutes of the federal and provincial legislatures; a rapidly growing textbook collection; a small section of government documents, and several series of publications from independent legal bodies (such as law associations and law reform commissions). We also have, what we call, our reference area, which consists of such things as digests to the law reports, encyclopedias of law, dictionaries, directories, and loose leaf services which send regular updates of new case law. Our collection of British material, often used as precedent for our Canadian common law, is fairly small, and our collection of American material is smaller still. Most of the development has been in the area of Canadian law reports and textbooks, and the collection is basically the same as that of any practising law library in Canada. However, whenever possible, I have tried to augment it with material pertaining to native and northern issues. This consists of some historical information, new texts by individuals and native associations, law reports, and government publications, especially those of the Department of Indian and Northern Affairs, and our own Legislative Assembly. Because we are the only law library open to the public, we try to

make available a small selection of legal textbooks oriented toward the "layman".

A microfiche reader-printer is on the agenda for the near future. We hope that this will allow us to expand our collection, without causing us to suffer the inevitable accompanying lack of space. We also hope to be able to access QL, which will allow us to learn of resources we do not have, at the same time that it functions as an excellent index to our collection.

The library is presently housed in the new court house building, which was completed in 1978. The old court house was above the post office, and the library at that time consisted of some shelving units around the walls. In the new building, it was decided that the library would have its own room, and a small section of the second floor was set aside for this purpose. However, with the arrival of Mr. Justice Tallis, in May of 1976, there was much greater emphasis placed on building up the collection, and in January 1978, a librarian was hired on a contract basis, to organize the existing books and create a standard law library. She was aided in this venture, by the then librarian of the Department of Justice in Ottawa, Miss Betty Rowe, who was brought in for several weeks as a consultant. Unfortunately, by this time, construction of the new building was underway, and it seemed impossible to correct the problem of lack of space in the library, which was immediately identified by both Betty Rowe and Wendy Carrico, the librarian. By fall, the librarian position had been made permanent, and a library technician hired. By winter it was becoming painfully obvious, that compensating for years of library neglect was resulting in a severe problem of overcrowding. However, the government has recognized our problem, and we are examining possible alternatives, given the fact that nowhere else in the building is the floor reinforced to support the weight of full height shelving units of books.

Our customers are, first, those involved in the administration of justice and the court system - that is, the 30-40 lawyers resident in the N.W.T., the four judges, and the staff of the court services division of the Department of Justice and Public Services, to which we belong. We also serve visiting judges and lawyers, other government employees, and are being used increasingly by the general Yellowknife population. Our bimonthly acquisitions list is distributed to the other libraries in town, the law firms, and interested government departments and community groups. We lend most of our material, and if a lawyer from another town wants information, we will either photocopy it for him or lend it by mail. We have done a few inter-library loans of our material to other libraries, and we rely quite heavily on the law libraries in Alberta, as back up for our collection.

In the two years since the library's official installation, we have grown from a few shelves in an office, to a collection

numbering approximately 5,000 volumes. Two permanent staff positions have been created, a small library has been set up in its own room in the new Hay River court house, and is cared for by the court clerk there; we have set up small collections of material in four other N.W.T. settlements; we receive acquisitions lists from law libraries across the country, and distribute ours in exchange. As we join the ranks of full fledged libraries - overcrowded, overworked, and understaffed - I must say that I have found other librarians to be unfailingly cooperative and helpful to us as we struggle through our growing pains. And if there is any way in which we can help any of you, our hours are 8:30 a.m. - 5:00 p.m., Monday to Friday.

Northern Information and Documentation in the Department of Indian and Northern Affairs

Gertrude Rosenberg, Department of Indian and Northern Affairs

Introduction

I've been asked to talk about the Northern Research Information and Documentation Service Centre of the Department of Indian and Northern Affairs which was established in 1976 and I think it best to make clear right away that this is not the only Centre in which northern material is located but, as in any good bureaucracy, there are four or five such centres plus the Departmental Library which, while not a purely northern collection, does have considerable material on the North. In addition, there are two good reference and research centres in our Indian and Inuit Programme which have material on the native people in Canada south of 60°.

I'll try to talk very briefly about all of these, but I'll concentrate, as requested, on the Northern Research Information and Documentation Service, not only because I know it best but also because it is rather different from other Documentation Centres. The only other resource I know of which is at all like this is the Arctic Environmental Information and Data Centre in Anchorage, Alaska, which we heard Barbara Sokolov describe, and which has certain goals in common with ours.

Northern Social Research Information and Documentation Service

This Service was established in 1976 as a result of many inquiries and complaints from researchers and planners who were exasperated because, as they said, it was almost impossible to find out what research was being done in the Canadian North, who was doing it, exactly where the field work was being conducted, what the purpose of the research was, what methodology was being used, and when and where a report would be available. Purely scientific research was not too difficult to locate but studies in the social sciences on matters of concern to life in the North - this was the problem area. What these people wanted was not a list of current publications nor even the reports themselves, but a knowledge of the work while it was still being done in the North, in the Social Sciences, on the economy, environment, health, oil exploration and its effects, transportation, communications, education, constitutional development, social impact assessment, native rights and land claims, in fact anything which would affect the lives of people living in Northern Canada.

Collection of Information

To this end, we contacted as many sources of such information as we could find - about forty Federal Government Departments and Agencies, the Governments of the Northwest Territories and the Yukon, over twenty universities, hundreds of consulting firms and industries and several native organizations. Personal interviews were held with most of these sources, to explain why we were seeking this information and how they would be able to use it. As a result, the response was excellent for those we met, about 99% for government and 90% for the universities. Consulting firms came up with a much smaller amount of information, industry with almost none and native organizations very little (for very justified reasons, because most of their current research concerns land claims and is confidential).

There were also, of course, printed sources, such as the N.W.T. Scientists' Licences and several of our own Government publications and later the A.C.U.N.S. Directory, but the great bulk of the information came from personal contact, after which questionnaires were completed. The information we elicited is very detailed. It is recorded on mag cards (not library cards) by our word-processing centre, which are then classified using the U.D.C. system according to subject, geographic area, and source of the research, so that it can be easily retrieved in each of these ways.

When each project is completed, and the time varies tremendously, from six months to five years or more, we ask the researcher to send us a report, or a progress report, which is then kept on our shelves. The vast majority of these reports are typed, unpublished documents, some photocopied, some unbound, which are seldom found in libraries, many of which do not want or have not the personnel to deal with this sort of "fugitive material."

We have found, over the past few years, that among those looking for current information, some also want to see the reports when published as well as older material in the same fields. As a consequence, we have recently begun to put more emphasis on the collection of reports, both current and dating back a few years and we intend to emphasize this report collection even further. In effect, we now have a small collection of such reports - about 2,000 relating to current and recent research and perhaps 1,000 older ones dating back to the 1950's and 60's.

Dissemination of Information

To communicate this information to those who need it, we publish annually a detailed listing called Current and recent research and studies relating to northern social concerns. To

date, there are three volumes, the third being issued in two parts of which the second is now in press and should be available this summer. These list projects in work from the early 1970's to 1979. They are sent to our Division's regular mailing list of about 500 libraries and interested organizations, while we have a special list for researchers who have requested this particular publication. In addition, we always have some hundreds of cards containing more up to date information and researchers come to our Documentation Centre to use this current material.

We have recently given our data to CISTI (Canada Institute for Scientific and Technical Information) who have made it available online on CAN/OLE. This process took about two years to get going and now there will be changes made because it will be our own Department which will convert our data to machine-readable form and hand it on to CAN/OLE. We would, therefore, very much appreciate any feed-back we can get from you as to the good and bad points in using this database, so that corrections can be incorporated into the next entries.

We also receive a good many inquiries by letter, telephone and personal visits to our Centre, not only from local researchers and students, but from right across the country, the United States and even a few from Europe.

The one thing we cannot do is photocopy reports to send out to inquirers, unless the research was done by or for us. We cannot charge for photocopies and it is not possible to xerox and send the thousands of pages we are sometimes asked for. People are referred to the contact person for each project or are invited to come to our Centre to consult the material there. Visitors are always welcome - that is, after all, why we were established.

NSRD Publications

I should also mention here that our Division has been publishing reports of our own research since the late 1950's, in the North of 60° series as well as in other smaller series. We are glad to send any of these which are still in print to those who request them. A list has been included in the document describing our work which you have received in the Colloquy dossier.

Other Northern Information Services

As you may know, the Department of Indian and Northern Affairs is made up of two separate Programmes. Indian and Inuit Affairs covers native concerns south of 60°; Northern Affairs encompasses Canada North of 60°. It is, of course, the Northern Programme's Research Information and Documentation Service which I've been talking about.

In addition to this service we have a Northern Pipelines Documentation Service, a Northern Statistical Information Centre and an Inuit Art Section Reference Centre.

The Pipeline Documentation Centre is essentially a centralized information bank pertaining to northern hydrocarbon transportation. It dates back to 1970, to the Environmental-Social Program, for which over a hundred social and environmental reports were produced, many on pipeline development in the North. Later the collection of pipeline material grew and now contains applications, transcripts and supporting material on the Mackenzie Valley and Alaska Highway inquiries as well as on other pipeline proposals and reports resulting from them. (Dempster, Polar Gas, Arctic Pilot Project, Foothills, Norman Wells).

The Statistical Information Centre is just what its title suggests. It holds reports, charts, publications of the Northern Economic Planning Branch and several statistical information series on socio-economic, legislative and demographic subject matter.

The Inuit Art Reference Centre contains exhibit catalogues, annual print collection cataloques, art newsletters, some books, some slides and biographical information about Inuit artists.

I would also like to mention the two Reference Centres within the Indian and Inuit Programme because although this is not northern material, northern researchers do need information on historical material and Canadian Indian Treaties, the Indian Act, aboriginal rights, etc. This material is held in the Treaties and Historical Research Centre, while the Program Reference Centre collects in-house reports, policy statements, and other information pertaining to the cultural, social and economic life of the Indian and Inuit people.

Finally, we have the Departmental Library. I have brought a brochure which describes briefly its role and collection. The point to remember is that this is not strictly a northern library but contains a mass of material on Canada south of 60° and, until very recently about half the collection was on Parks Canada. There is a special small Arctic collection which has historical and rather rare material dating back many years, but the bulk of northern books are scattered throughout the whole collection.

There have been certain difficulties common to most libraries - shortage of staff, almost no money under the direct control of the Library and recently two successive Chief Librarians have left. But we do have a dedicated and helpful reference librarian.

Conclusion

To go back to the Northern Research Information and Documentation Service, there is one point I want to emphasize. In spite of what you hear about the Government's possessive attitude toward its information, all my documentation is available for consultation to those who want it. My attitude has always been that the only reason one collects information or documents is to pass it on to those who need it.

If you need recent northern research information or refer requests from those who need this, particularly non-published material, we will be very glad to handle these inquiries quickly and, we always hope, with satisfying results.

Q. How do you manage to get people to keep sending you the information?
A. You don't go back to them specifically. We tried going back to the list we had last year and got nasty comments on letters saying you asked me 8 months ago and I am doing the same research. I go back to the first volume and ask people who responded about three or four years ago what they are doing now. Also you also find new researchers, new people coming into the field and that is why personal contact is so important as one tells you about another.

Q. Do you cover only research funded by government?
A. No. It is research, it is theoretical, always a source of concern in the north, no matter who is doing it, no matter who is funding it. I do not claim to have identified 100% of it but I feel I have 80-85%.

Q. Do you include researchers outside of Canada?
A. I have started that this year. There are American Universities and the Japanese that I am beginning to include.

Q. How often will the file at CISTI be updated?
A. I think about twice a year, I can't see it more often and that is not really good enough. If I can speed it up I would like to get it updated every two months.

Q. Will you reprint earlier reports?
A. If we get considerable requests, yes we do reprint out of print earlier reports. We considered the Bankslanders, so far we haven't done it.

Q. Is there a list of publications of the whole department? What is the best way to be sure one gets them all?
A. I will give you the address of someone in the publications division and even then you won't be sure because each division has its own publications section. There is one which covers the Northern Program and another that covers the Northern and Inuit Program.

Cooperation in Bibliographic Services

Geza Thuronyi, Library of Congress

Competition and cooperation are the two alternative principles governing relationships between individuals and organizations in a free society. Competition is the preferred alternative, or so it would seem from the saying: "If you can't beat them, join them." Nevertheless, cooperation has its advantages: it is cheaper than confrontation; guns are more expensive than butter, or margarine. Cooperation can be useful in many situations. Lawyers' fees in divorce proceedings may be greatly reduced if the parties cooperate; and immunity from criminal prosecution has often been granted to the accused who cooperate by naming their accomplices.

The advantages of cooperation have long been recognized by members of the Northern Libraries Colloquy. One of the original aims of the group was the assessment of available resources and capabilities of northern collections and bibliographic services. Obviously, the idea of cooperation was implicit in this stated objective.

Cooperation became one of the explicit themes of the 3rd Colloquy in Cambridge. At this meeting a committee was formed with the mandate to study the feasibility of an international bibliography of northern literature. At the next meeting, in Montreal, results of a questionnaire regarding existing bibliographic projects were reported, and the possibility of sponsorship by an international organization like UNESCO was discussed. At the 6th Colloquy, in Fairbanks, hopes for a northern-oriented bibliography were revived -- mostly by wishful thinking -- and a committee was formed to explore the various options. Pete Anderson, one of the co-chairmen of the committee, gave a detailed status report in the September Northern Libraries Bulletin. Possibilities, at that time, included production and marketing of a northern bibliography by a commercial firm. The committee's report at the Paris meeting in 1978 was largely inconclusive, but it was decided to extend the committee's mandate.

In the meantime, some of the constituents of the Northern Libraries Colloquy took the initiative in establishing their own programs of cooperation. Examples of regional cooperation between Scandinavian libraries were reported at the Rovaniemi meeting, and those between Alaskan libraries at the Fairbanks meeting. The Scott Polar Research Institute had working agreements with the Arctic Institute of North America and with the Boreal Institute for Northern Studies in the area of cooperative card production and UDC classification. At the Paris meeting, the World Data Center A for Glaciology reported on its use of Cold Regions Bibliography tapes to save cataloging time. And I was amazed at the number of current cooperative arrangements reported here today and yesterday.

In the world of library and information services at large, various forms of cooperation have been practiced on a regional, national, or international level for many years, ranging from interlibrary loan agreements to the publication of national bibliographies and the operation of sophisticated library networks. It would be impossible here to do more than hint at a few examples of such cooperation, especially as my intention is to stimulate thought rather than to review the state of the art.

We are told that interlibrary lending goes back to the 14th century, when it was practiced between monasteries. Incidentally, to my knowledge, the question of interlibrary loans among member organizations of the Northern Libraries Colloquy has never been formally raised. This kind of cooperation is modest, in that it requires a minimum of technical agreement and does not involve costly equipment. We may find it useful to explore this area among ourselves.

The most widely practiced advanced method of cooperation, at present, is probably networking. The pioneer in online library networking was the Ohio College Library Center (OCLC) system that started out in 1971 with 47 charter member libraries sharing cataloging and other library functions, and has since expanded into the largest existing network. Other similar groups have been organized; to name a few: the LC MARC System, the Stanford University BALLOTS system (now the Research Library Information Network), the Washington Library Network, the Atlantic Universities of Canada/Blackwell North America project, SCANNET in Scandinavia, EURONET for several European countries, AUSSINET in Australia, and many others. One of the obvious common characteristics of these networks is the communication linkage to computer stored data files of cataloging and other types of records, and their online availability to a large number of geographically disperse participants. Another is the existence of a central organization that maintains the facility and coordinates the member libraries' contributions. If cooperation in the true sense is to be achieved, participants in the network are not merely users of a facility, but active contributors as well. It follows that certain standards of bibliographic input must be agreed upon and observed. This does not necessarily mean total uniformity, but agreement at least on a minimum bibliographic input format is a prerequisite to a cooperative arrangement where input is provided by a number of parties. Another requirement, it seems to me, is strong central coordination. Obviously, participating libraries must give up some of their practices and independence. They also must be in constant communication to adjust to changing circumstances. This is what Audrey Kolb had in mind when she wrote in Search Media in 1977 that the network provides a rewarding, if stressful, challenge to participating libraries.

Requirements of uniformity and central control become particularly important when the aim is not only to establish a network of cooperating libraries, but to create a bibliographic

information system using input from a large number of contributors and generating a homogeneous data base without duplication of records, and a properly indexed biliographic publication. On an international scale such cooperative systems have been achieved by AGRIS and by INIS. Because these systems may serve as models to others with similar aspirations, I would like to review briefly how one of them works. I will do this on the basis of the INIS Descriptive Cataloging Rules published by the International Atomic Energy Agency.

INIS, the International Nuclear Information System, receives input from national centers all over the world. Input consists of bibliographic citations of newly published documents, such as books, individual chapters, journal articles, conference papers, technical reports, theses, or other forms of recorded information. The input record consists of the bibliographic description, a set of descriptors, and an abstract. These records are sent by the national centers to the International Atomic Agency in Vienna, where they are merged with the master file. Copies of this file are distributed to the national centers, where they are used to provide information services within each country. A printed abstracting journal, the INIS Atomindex is photocomposed from the file. Conversion to machine-readable form is done either at the national centers or in Vienna. In either case a worksheet is used for the original input preparation to assure absolute uniformity. The INIS Descriptive Cataloging Rules are documented in a 77-page manual. The 1977 manual is a revision of the original 1971 issue and incorporates all changes announced in a number of circular letters. I am mentioning this to illustrate the fact that effective cooperation in a system of this type requires constant communication regarding rules and practices. The manual addresses itself to the whole process of input preparation. The following are some of the topics covered: deciding whether an item is in scope; bibliographic levels; different treatment of conventional and non-conventional literature; how to fill out the worksheet header (temporary record number, country, year, serial number, worksheet control, translations, whole/part relationship, other relationship, subject category, type of record, literary indicator, etc.); data elements (personal author, relator, affiliation, joint author, corporate entries, title, subtitle, conference title, place and date of conference, series title, journal title, edition, identifying numbers, place of publication, publisher, date of publication, collation, language, type of record, availability, title augmentation, authority code); descriptors; abstract. All these are described in detail and illustrated with examples to ensure uniformity. In addition to this manual, a number of other documents have been issued for use by the contributing centers; some of these are: subject categories and scope descriptions; instructions for submitting abstracts; terminology and codes for countries and international organizations; authority list for corporate entries and report number prefixes; magnetic and punched paper tape codes and character sets; paper tape specifications and record format; magnetic tape specifications

and record format; transliteration rules for non-roman characters; authority list for journal titles; manual for indexing; thesaurus (English and French versions); and self-teaching manual for descriptive catalogers. Obviously, each of these documents is filled with detailed instructions and specifications.

I know I have been boring you with these lengthy enumerations. But I could not think of any better way of showing what is required in order to produce a data bank and publication from input provided by a number of contributors on an international, or even a national or regional level.

Where does all this leave us as members of this group? I think, most or all of us agree that a total bibliographic system, covering the entire northern literature on a cooperative international basis, would be a premature aspiration at this time. What appears to be realistic, however, is a similar system on a regional or national basis. We have heard that such systems are now in operation or being planned. These systems should attract other organizations to join, perhaps gradually expanding to other countries; or institutions in other countries may similarly organize on their own, and then several national systems could eventually be linked together in a single network.

There is another approach that suggests itself as practical. Some of our computerized databases are now available online. The input to these databases is provided by single institutions, several of which have reported to us during the last two days. The idea would be to encourage other institutions to provide additional input to these existing databases, thereby increasing the number of citations available online. I have been explicitly asked by our sponsors to explore this possibility in its technical, administrative and financial aspects in respect of the Cold Regions Database of the Library of Congress, that is offered commercially by SDC or Infomart.

Other possibilities of cooperation are bilateral or multilateral (again, we have heard of progress in this area) agreements on shared cataloging, shared acquisition programs, privileged borrowing arrangements among Colloquy members, and others. Perhaps some of these possibilities can be discussed, formally or informally, during the rest of this colloquy.

Now the final question: what should be the role of the Northern Libraries Colloquy, as an institution, in encouraging, coordinating, or operating cooperative ventures? In a 1973 report, Garth Graham recognized that in order to play an active role in bringing about some type of cooperative system, the Colloquy itself would have to assume a more formal structure. Since then, various suggestions aimed at shaping the Colloquy into a structured organization, have received little support. We must realize that, in its present form, the Colloquy does not have the means to coordinate, let alone operate a network or

cooperative system. We must limit ourselves to giving encouragement to whatever promising projects our member organizations may wish to undertake.

This is probably as it should be. At the first meeting, the principal objective of the Colloquy was stated to be exchange of information and ideas, and exploration of ways of communication among centers with northern interests, and among their users. Today, nine years later, this is still a valid objective. By bringing this group together at regular intervals, the Colloquy has enhanced awareness of developments in our field and stimulated individual and joint initiatives.

There are many obstacles to effective cooperation: inertia, lack of funding, unwillingness to compromise on past practices, etc. Perhaps one of the most formidable obstacles, however, is lack of understanding and appreciation of each others' aims and aspirations. Because of our participation in Northern Libraries Colloquies, this is one obstacle we shall not have to face.

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The Franklin Report Revisited: a further investigation of database manipulation in aid of polar research

Martha Andrews, Boulder, Colorado

In 1974 the 16th and final volume of the Arctic Bibliography was published. The Arctic Bibliography was a manual abstracting and indexing service which covered medicine and health, all of the sciences, the social sciences (which included the economy, mineral exploration etc.) and native peoples pertaining to the Arctic. This was published under the auspices of the Arctic Institute of North America between 1947 and 1974. The 16 volumes contained approximately 110,000 citations from all over the world in numerous languages. While the major part of this material was from many hundreds of serial publications (over 600 in volume 16), non-serial materials were also included. However in 1974, due to the expense of compiling the Arctic Bibliography manually and a rather disastrous attempt to convert to an automated production method which proved to be even more expensive, funding for the series was discontinued.

In 1975, some of you will remember at our meeting in Finland that there was quite a lot of discussion about whether or not it would be possible to get the Arctic Bibliography going again. In spite of our protestations at that meeting that the new computerized online bibliographic services could never replace the Arctic Bibliography in either quantity or quality, the Polar Information Service of the Department of Polar Programs of the U.S. National Science Foundation in 1976 awarded a contract to the Franklin Institute Research Laboratories in Philadelphia to determine if commercial online bibliographic services could replace or substitute for parts of the Arctic Bibliography. This gave us what we refer to as the Franklin report, which was published in 1977. In addition to answering the question "Are the commercial online bibliographic services an adequate substitute for the Arctic Bibliography?" the goal of this report was to answer several other questions. Among these were:

"Which online services include material searched in the AB project"

"Is the coverage of the Arctic related materials online more complete than the AB coverage was?"

"Can the expected number of Arctic related citations be retrieved online?"

"How should an efficient online search be designed?"

"Which Arctic related publications do the online services scan?"

"What is the overlap in periodical coverage by the various online services?"

"Does each journal searched for AB contribute an equal number of citations?"

The methods that they used in the study were all statistical and it is my opinion that the people who did the report had no feel for the materials that were involved.

In the first step, through a rather detailed process of elimination ten databases were chosen for further evaluation on the basis that they were indexing the largest number of journals also searched by AB. These databases were Biosis Previews, CA condensates, Compendex, Georef, Medline, MGA, Oceanic, Pollution, SciSearch and Social SciSearch. It is to be noted here that only journal articles were considered from this point on even though AB indexed many publications which were not journal publications.

In the second step of their procedure they used a sequential analysis technique credited to a man named Abraham Wald on a random sample of AB citations to determine whether the expected number of citations was found in each of the ten databases. In the third step the results of sequential sampling were used to estimate the percent coverage of the arctic related literature by each of the databases, with 95% confidence intervals based on sample size.

Regarding the choice of statistical methods, there was some question by reviewers, particularly reviewers from Biosis Previews, as to whether these techniques were appropriate choices. Regarding the sequential analysis technique, Biosis Previews says this was "devised in 1947 to estimate the population of imperfect products in a productionline environment. Its applicability to data in this study is questioned." However, the main problem may not be in the statistical techniques (I really can't pass judgement on that), but with a basic wrong assumption underlying the technique right from the very beginning of the report. This assumption is that "if a database covers a certain percentage of the journals cited in volume 16 of AB, then the database will contain this same percentage of the citations that are in AB volume 16." This is the same as saying that, for example, if you took the Oceanic database which scans 76 of the 607 journals covered in volume 16 of AB, then this database should contain 12.5% of the citations found in AB, which of course it didn't, and so they started right away with this invalid assumption. The report also goes on to claim that whether or not this is a valid assumption does not matter as it has no weight in the final decision. Having said this, the sequential analysis proceeds to be based on this assumption leading, I believe, to invalid conclusions.

Of the ten databases subjected to sequential analysis the only database showing the expected number of citations was Georef. That Georef did indeed meet expectations is not even clear. When this testing by sequential analysis was inconclusive, an unspecified "further testing procedure" was used to indicate

that Georef met expectations. The sample proportional analysis, which used the same random sample as the sequential analysis, found Georef, MGA and Engineering Index had true citation overlap between AB and the database bigger than the percent of journal coverage. That's a little bit foggy because they came up with such a range of percentages that it was a little hard to pin down that one. At any rate, five databases, (CA Condensates, Biosis Previews, Georef, Oceanic and Medline) were identified by the analysis as containing more of the Arctic literature than the remaining five databases. These were further evaluated considering such factors as indexing, cost of searching, ease of use, journal coverage overlap with other bases, and searchable fields. Sample searches were run on each of these bases, and I'll discuss those shortly. Taking into consideration the several parameters in comparing the online database services with AB it was concluded that the online services are:

1) more expensive to the individual user
2) require specialized training and equipment to use
3) did not have abstracts available as readily
4) required use of more than one discipline-oriented service, and
5) the databases are indexed to discipline rather than area.

Although the Arctic Bibliography had the advantage of being inexpensive to the individual users and was simple to use with abstracts provided in one place for all disciplines, and with an Arctic research oriented index, it had what came to be considered in the 1970's as a fatal flaw, that was its lack of currency. The online databases are believed to be current, however, yesterday here two speakers both told us that they couldn't wait for things to come up on the databases!

The basic conclusion of the Franklin report was that the AB series cannot be effectively replaced by commercial online bibliographic services because the total population of citations that would be selected for such an Arctic bibliography is not available in commercial services. We could have told them that without them spending over $20,000 on the study.

The Franklin report deals only with the question of coverage of the periodical literature, as I've already mentioned. In fact AB also indexed and abstracted monographs, yearbooks, handbooks, trade journals, occasional publications, state documents, university publications, etc. Even in the area of journals and periodicals AB covers publications in transportation, history, folk and cultural studies, art, architecture and some geographical publications not notably present in major databases. Foreign language materials sometimes comprised the majority of citations in a single issue of AB. In fact, towards the end I believe it almost always did.

Now this is how I feel about this report. I feel that they based the whole thing on a wrong assumption to begin with and I also feel that their computer searches were not designed to show

what really was available in the databases. And they also claimed that the databases do cover 440 journals of the 607 that were covered in the last volume of AB, and I don't understand why they didn't get more information if that was the case. I think it is probably because of the way they did their searches. The Franklin report does maintain that that 10 databases did not cover the same articles from AB that it would have in the journals that they both abstracted. They did not cover the same items; I don't understand that either, because even though AB would not have covered all items because of its area orientation, I see no reason why the databases would not have chosen the materials that pertained to the Arctic when they were also in their discipline. There is no discussion in the report as to why or how their search subjects were chosen, yet much of the conclusions are made from the results of those searches. For the purposes of the Franklin report searches were run on the following five databases: Pollution, Georef, CA Condensates, Biosis Previews and Social SciSearch. The three search topics were:

1) oil pollution in Alaska
2) ground characteristics of permafrost, and
3) housing in Alaska, with emphasis on housing for Eskimos.

Using one or two of these topics on each of the five databases produced a total of only 78 records. But when I went back and looked at their search strategies where they had to line up each item one by one to get postings on it, you could see that Alaska all by itself as a search statement showed 131 records in Pollution, 1904 in Georef, 423 in CA condensates, 844 in Biosis Previews and 209 in Social SciSearch. Permafrost as a search statement produced 821 records in Georef. The problem was that when they tried to use indexing terms peculiar to AB and combined ground characteristics and permafrost, they lost all of permafrost too. Although some of these numbers represent an overlap between databases it seems clearly indicated that large amounts of Arctic material were available in the databases if one were to use appropriate search strategies. A thorough exploration of this premise would require a lot more time, money and search experience than I have personally. However, the pursuit was sufficiently intriguing to me that I decided to have run at the World Data Center A for Glaciology in Boulder some very simple searches by which we might sample the amount of Arctic coverage available in some of the online databases. Let me emphasize that we were concerned only with the commercial widely available databases, and the only ones available to me were those from Lockheed or SDC. It occured to me that it would be possible to choose search terms which by definition were almost exclusively in Arctic regions and thereby overcome the handicap posed by the fact that area terms, such as Arctic, are usually neglected by database indexes. Some of these terms are the same ones used individually in the Franklin report, so we could have a little bit of comparison. For example, when permafrost by itself was searched in Georef in 1976 there were only 821 records, by now there are 2,264.

I chose 16 different databases to run these on, six of which were also used by the Franklin report, i.e., Biosis, Georef, MGA, Oceanic, Pollution and Social SciSearch. Additional ones were selected on the basis of their apparent relevance to current issues such as Tulsa, Energyline, Enviroline, or their recent availability such as COLD, CAB Abstracts, etc. Most of these databases covered the literature published from varying dates in the 1960's to the present. The Arctic Bibliography during its life span indexed an average of 4,800 items per year, but their date of publication started very early. We can't do the same thing with retrospective searching on databases. I attempted to find terms in what I felt were six general areas in which AB had attempted coverage in approximately equal quantities, and these were medicine, biology, social sciences, minerals and exploration, atmospheric sciences and geology.

The first category, medicine, was noticeably elusive. The search for frostbite or hypothermia turned up very little in Biosis Previews. And in Conference Papers Index a sample printout showed that these terms are not confined to the Arctic. I did not have access to the medical databases.

The second category, biological sciences, a search for polar bear or tundra turned up 807 records in Biosis Previews and 443 records in Commonwealth Agricultural Bureau Abstracts. Even allowing for some possible database overlap, this seems good.

In the social sciences category the term Thule retrieved nothing, however the word Eskimo when searched in several databases showed 73 records in Social SciSearch, and 114 records in Sociological Abstracts. I believe the indexing methods in some of these databases make it difficult to find items by other than title words, but I am not sure of that. I think it also indicates that the social sciences are not receiving as much attention as are the sciences from the database producers.

Now, in the field of minerals and exploration there has been a lot of material indexed. In order to confine subject terms to an area for this category, Alaska was used as a search term linked with pipeline or oil pollution. Alaska linked with pipeline showed 606 records in Tulsa, 366 in Enviroline and 373 in Energyline. Alaska hooked with oil pollution in these databases showed very little as it also did in Pollution Abstracts. However in NTIS this search showed 135 records.

In atmospheric sciences it was again necessary to tie subject terms to an area. This time sea ice or snow cover linked with Arctic were chosen as the search strategy. Cold Regions Bibliography showed 667 postings, MGA showed 266. Arctic by itself in the process of that search showed over 1,000 postings each in MGA and Oceanic Abstracts, which is another indication of there being abundant material that is available.

At the time the Franklin Report was issued, Georef, indexing the geological sciences, was considerd to be the best database for Arctic coverage. Between 1961 and 1980, 2,264 records were entered for permafrost. During the past two years or so this database has been upstaged somewhat in this field by the Cold Regions Bibliography which will be demonstrated later to-day. They have over 6,000 records on file for permafrost. Now their printout would show that a fairly large portion of those are not confined to arctic areas because they are also considering laboratory studies and similar types of things. But it would seem that this database certainly lends itself to becoming part of a core database, perhaps with things that are on SPIRES, or in the network such as Geza Thuronyi was proposing, if such were ever feasible.

So what can we conclude from this resampling? Probably nothing definitive. However, even excluding the Cold Regions database, nearly 4,600 mutually exclusive Arctic items published in the last 16 to 20 years can be very quickly found on the commercial databases as indicated by the table.

Table I

Polar Bear or Tundra (BIOSIS '63-'80)	807
Eskimo (SOC ABS '63-'80)	114
Alaska and Pipeline (TULSA '65-'80)	606
Alaska and Oil Pollution (NTIS '64-'80)	135
Sea Ice of Snow Cover and Arctic (COLD '62-'80)	667
Permafrost (GeoRef '61-'80)	2264
	4593

If at some time, energy and money were made available to design a search manual emphasising arctic materials or make an SDI profile available for Arctic research at all levels, what might we come up with then? Whether or not the type of bibliography produced through even a sophisticated level of searching on the automated databases would be comparable to the old Arctic Bibliography is, at this point in time, irrelevant. The Arctic Bibliography has gone forever and it is up to us now to come up with the best substitutes we can.

Q. At a previous colloquy the possibility of a different index to

the Arctic Bibliography was raised. Did anything come of it?
A. (G.A.C.) No. Unfortunately we ran into insurmountable difficulties trying to fund a bi-national project. If you remember it was to be jointly done by Institute of Polar Studies in Ohio and the Boreal Institute. It is still something I would like to do.

(M.A.) I think it would still be very useful.

(G.A.C.) The basic idea was to take the 100,000 odd references in AB and systematically enter the author, title, year of publication and AB number and run a KWIC index. This would give a complete author index to the 16 volumes of AB, as well as a very interesting different subject index from the terms in the titles.

Q. What sort of funds did you have in mind at that time?
A.(G.A.C.) I forget. About $90,000 total I think. This was to be split between the two Institutes. Essentially Boreal Institute was to be responsible for input and Institute of Polar Studies for the output product.

Q. Would it not be a logical thing to have ASTIS do this to enrich their database by over 100,000 items as well as producing an index?
A. (G.A.C.) I don't think it would be in a format suitable for them. The idea was that the input would be the basis for anyone to add to, eg. abstracts, to make it more complete, since it would be a simple line file.

(R.G.) We have considered it, but it is not practicable.

(M.A.) There could be some technological problems to be considered

(G.A.C.) The other thing that we ran into unexpectedly was that AB changed (i.e., was not consistent) its geographic coding system, as well as subject terms. The only parts that were useable were the author, title and abstract, citation and AB number. I experimented by entering in geographic codes but it didn't work.

Bibliography of Northern Canada: progress report on a proposal presented to the Seventh Northern Libraries Colloquy, Paris, September 1978

Trevor Lloyd, A.C.U.N.S

The Seventh Northern Libraries Colloquy which met in Paris during September 1978 was provided with a summary report about a Canadian initiative to produce a periodical current bibliography of scientific and technical literature concerning the Yukon and Northwest Territories and the more northern parts of the provinces.' As far as practicable it was to be compatible with any eventual international polar bibliography. The Association of Canadian Universities for Northern Studies was at the time preparing a feasibility study for the project. The report was given to the Colloquy in the expectation that delegates' comments would prove beneficial.

The Association of Canadian Universities for Northern Studies had invited a group of northern library and bibliography specialists to advise it during preparation of a draft "Proposal" which would be redrafted into a definitive version following consultation with a broader group of specialists and potential users of the system. The draft had reached this stage by the early summer of 1979. This document included a 23 page basic report with six appendixes, for a total length of 45 pp. The abstract of the draft Proposal read as follows:

"Bibliography of Northern Canada (BNC) is proposed as Canada's primary northern database network, providing online access, periodical printed bibliographies, associated cumulative indexes and other services. The network would initially include six participating universities and public agencies. These would contribute most of the bibliographic data and would have a predominant part in management. A centrally located editorial and technical staff would assemble and manage the database and prepare the bibliographies. Overall responsibility would lie with a corporation, possibly affiliated with A.C.U.N.S.

This Proposal has been prepared with the aid of technical specialists from the potential participants. It outlines how BNC would be organized and operate, what products could be distributed, and what the costs and revenues are likely to be. A time schedule is provided under which technical development (including selection of the database management system, setting of bibliographic and indexing standards, and testing, etc.) would occupy the first year. At that stage, the decision whether to

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' Bibliography of Northern Canada, Seventh Northern Libraries Colloquy, September 19 - 23, 1978. 6pp. A.C.U.N.S., Ottawa.

Bibliographie du Nord Canadien, Septième Congrès des bibliothèques Nordiques, Septembre 19 - 23, 1978. 6pp. A.U.C.E.N., Ottawa.

proceed would be made. A schedule for the first four years of operation is also given.

The financial statement emphasizes that the undertaking could not be self-supporting. The first technical development year would produce no income. The fourth operating year should return about 35% of costs by sale of products and services. Suggestions are made for sources of the balance of revenues."

Copies of the draft Proposal were sent in confidence to about thirty organizations and individuals inviting comments. The covering letter included the following paragraph:

"A draft Proposal for a Bibliography of Northern Canada has now been put together and is being given very limited circulation before a final version is prepared. The Association is sending you a copy and invites your comments on both its general approach and the specific proposals. Several matters are left for further consideration, such as the computer system to be employed, the precise relationship among the proposed participants, and the corporate structure needed. Other open questions include the part to be played by this Association and the proposed sponsorship."

The comments received were in many cases detailed and all of them were constructive and encouraging. There was consensus that the Project "was a good thing" which when revised would enable decisions to be made about financing the next step of the study - preparation of a detailed "blueprint" for the project itself. The draft Proposal had recommended a two stage approach, each to be financed independently. First, a year-long expert study which would include final determination of all technical requirements, all financial and legal matters, and preparation of a "handbook" or "blueprint" that would provide dependable cost estimates, permit the appointment of staff, and include formal agreements with participants. Many critical decisions about practical operation of the Project were intentionally omitted from the Proposal, being reserved for this stage. The second and final stage would commence with launching of the Project. A decision to finance stage I would be independent of any subsequent decision to fund the project itself.

Comments of critics have been studied and classified in preparation for final revision of the draft Proposal. It was estimated that about 3 months' work by a qualified editor would be needed to prepare the document and see it through the press. Unfortunately, funds needed for the revision, production and distribution of the Proposal have not been available, so completion of the document is being held over until the situation is ameliorated. There has been no lessening of interest in the project within A.C.U.N.S. Its officers and member universities continue to believe that creation of BNC and the northern database network would be well worthwhile. The Association will complete and distribute the Proposal as soon as the means become available.

Bibliography of Northern Canada

Garth Graham

The first thing I'd like to say is that about twelve people got together at noon, who have had an association with BNC, and tried to clarify what we all knew about the present state of this project. None of them were representatives of A.C.U.N.S. What you are going to hear from me are conclusions based on a lunch hour meeting. Therefore I urge you not to put too much credence on it, because I don't intend to do so myself at this stage.

The chief difficulty from the point of view of the participants in this project is that, as Trevor Lloyd has indicated, there is no final proposal. There are only a series of drafts and related criticisms. Although there is an indication of the need, and there is agreement on the concept, no-one is really in agreement as to what and how that concept will actually work itself out. Basically, a lot of work still has to go into the development of a proposal. The second difficulty as seen by those of us who met at noon is that the attitude of A.C.U.N.S. in relation to this proposal although Dr. Trevor Lloyd says that A.C.U.N.S. is interested, is at this point in time unclear. What is clear is that, as an organization, A.C.U.N.S. has not been able to advance the completion of the proposal since a year ago approximately. As a legitimate vehicle for coordinating such an effort in Canada, and seemingly the best one that we've been able to identify, the results have to date been somewhat inconclusive. The people who met at noon are extremely interested in a Canadian cooperative northern bibliographical network. There were several alternatives which emerged from the discussion:

1. To wait and see what happens to A.C.U.N.S. as an organization.

2. To explore whether there is any other coordinating agency in Canada, such as CISTI, which might be interested in picking up the proposal at the stage it is at now and carrying it forward.

3. To see whether the six participating institutions themselves as a vehicle could simply get together and decide to do it.

4. To keep in mind the kind of organic growth and merging of various databases that you've heard reported in Canada over the last day and a half and basically encourage this trend. Amongst the twelve of us who got together, there was no concensus as to which of those was the preferred alternative, although there was a concensus that there were some things which we could do while waiting to see what happens to A.C.U.N.S.

Nita Cooke and I are going to be lobbying certain interests that will be present at the Canadian Library Association meeting. Ross Goodwin has agreed to poke around on the problems and logistics of merging the existing databases. We are all aware that it is not clear the degree to which they are compatible or not compatible, or the degree to which standards need to be developed. Gertrude Rosenberg is going to keep an eye on A.C.U.N.S. developments. I personally have agreed that if A.C.U.N.S. does not do anything by the end of 1980, that I will attempt to be in contact with the six participants to see if there isn't some direct action which can be taken.

None of this sounds very good, but it is the situation as we see it. I would like to personally thank Geza for his comments. My role in the Northern Libraries Colloquy for years has been as one of the wishful thinkers. Geza's role has frequently been to remind us of the realities of inter-library cooperation and the realities of international cooperation. I must admit that my experience in the Bibliography of Northern Canada project underlines very strongly the comments that Geza made. He underlines what reasonable expectations we might have for an organization such as Northern Libraries Colloquy. It is basically an opportunity to come together and discuss common problems, an opportunity I for one continue to appreciate.

Q. Curious - what about countering the proposal? Surely with the expertise available you could probably come up with what we need to have.
A. This is so. The difficulty is that the leg work has basically been done by the six participating institutions, that work and all the draft information already exists. The problem is that the six participating institutions range from the Yukon to Newfoundland. The dollars to put them in one room long enough to shape the proposal (would probably take 1 1/2 to 2 days) are simply not there. Since it is clearly A.C.U.N.S.'s responsibility to do that and they have not yet indicated if they will go forward, no other agency has been asked to take the initiative. If A.C.U.N.S. decided not to proceed we do not know at this point if there is any other agency in which the project could be centered.

The Cold Regions Database: COLD

Geza Thuronyi, Library of Congress

The Cold Regions Bibliography has been described to this group several times, so I am just going to briefly recapitulate what the database consists of. Essentially the Cold Regions database has two components, one is the Antarctic Bibliography which contains bibliographic references published since 1962, and the other component is the Bibliography on Cold Regions Science and Technology which is sponsored by the U.S. Army Cold Regions Laboratory in Hanover, and has input since 1969. The subject coverage corresponds to the interests of the two sponsors. The National Science Foundation, that sponsors the Antarctic Bibliography, is interested in everything concerning the Antarctic so there is no subject restriction; it ranges from biology to stamp collecting. The CRREL bibliography is not regionally but subject oriented. It covers everything on the engineering aspects of cold regions, not necessarily Arctic, but also regions where frozen ground only occurs during certain times of the year or where there is snow during certain times of the year. So essentially we are interested in snow, ice, permafrost and other frozen ground, but especially from the engineering point of view; also in the construction of buildings, roads and pipelines in cold regions.

We have about 71,000 records in all and since 1972 the two components are merged into one so that records are not duplicated. Before 1972, there are some duplicate records between the Antarctic and CRREL components. The percentage of overlap: since 1972 we have a total of about 44,000 items, of these 30,000 refer only to the CRREL bibliography, 11,000 to the Antarctic, and 2,700 are pertinent to both. So as far as the total number of records is concerned, there is 6% overlap. As far as the CRREL bibliography is concerned there is 8% and in terms of the Antarctic bibliography, 23% overlap. It took me some time to compile these numbers by hand and it just occurred to me, it could have been done very quickly online. We do have a statistical approach. Each of the two components can be approached separately or jointly online. We also have statistical information about language and country of publication.

As far as document delivery is concerned, we cannot guarantee delivery of documents, but Nancy Dumont asked me to tell you that she will make every effort to make the material available on interlibrary loan or copies on an individual basis, but because of copyright restrictions we can't promise wholesale delivery. We do have a complete microfiche file of every document accessioned which we reproduce on a fair use basis, just for our sponsors without service to the general public.

I would like to repeat what I said earlier, that I invite any group that might want to join us in producing this database, and provide input into the database to get together with us and

SDC representative so we could expand it to cover additional areas of interest.

Searching the Cold Regions Database and Others for Northern Related Citations

Mary Laham, Infomart

Let me introduce myself by telling you that I am an information generalist (as are most information specialists!). A number of thoughts occurred to me when I was asked to prepare this talk - the chief one that as a generalist I could not hope to speak in specific terms about the northern content of every database. As one of the earlier speakers pointed out this would require a formal study to be done in authoritative detail. What I want to do today is emphasis that system users have access to a number of bibliographic files that individually or collectively, may respond in some measure to your information needs. Some comments were made earlier today about the inadequencies of most online files. It should be pointed out therefore in a prefatory way that system representatives and users can have input into selection policies by contacting file producers. What will be dealt with today is the way information can be gotten out of the online files, and how their structure differs from their printed equivalent, to make searching as easy and as comprehensive as possible ORBIT has a standard for most of its files. Therefore, although this presentation will concentrate on using the Cold Regions file, the same searching principles are applicable to almost every other file on the system.

The databases currently online are described in the brochure you have all received. (Available from Infomart on request). Let us consider the structure of a typical bibliographic record as it appears in almost any database. It normally has a title assigned by its author, index terms assigned, usually from a thesaurus with supplementary terms, by an indexer at the database producing agency, and frequently an abstract written by an abstractor at that same agency. In other words, at least three people have conceptualized and expressed the content of the original document. Given the richness of our language, this means that quite possibly three different ways have been found to express the same information. This is probably the single most important factor guiding one in doing a subject literature search. Unlike printed indexes which are bound by their presentation to a hierarchical arrangement, ORBIT allows one to look at every word in the text portions of the bibliographic record (title, index terms, abstracts); the searcher's job, then, is to try to think of and use every possible term that expresses what they are seeking.

For illustration, I have done some very simple searches on the Cold Regions file. For the sake of clarity, I have not used all the descriptive terminology to achieve a comprehensive result; I have simply tried to show how one would go about doing it.

Table 1 shows a simple search. Because of the vocabulary differences mentioned earlier, the most comprehensive approach is to input the question broken down into single words. The system will take those words and in effect search for them throughout the text of each record. The search was for "the response of people living in isolation", and I simply used the two words "response" and "isolation". You will note the word "response" in the title of the record and "isolation" in the abstract. To be truly comprehensive in this and the searches that follow, synonyms or equivalent terms for each concept should have been used.

If you want to be much more specific, for example, if you are looking for a particular title or are doing a "quick and dirty search" (that is for a few pertinent references on a subject) you can restrict your search to title words only. In Table 2 the system is being told to search the titles for the words "response" and "stress".

Most, although not all, databases contain some form of controlled vocabulary. For searching purposes both the controlled vocabulary and the supplementary descriptors are combined into one searchable field called index terms; if you are acquainted with the controlled vocabulary of a file because of subject headings in the equivalent printed index, or you have already done a search online and have noted some of the index terms applied to relevant references, or if you have the thesaurus, you can use controlled terms to search. (Table 3)

A very practical approach to searching controlled vocabulary is not to specify exact index terms, but rather to search for individual single words within the index term field. (See Table 4.) It overcomes some variations in the controlled vocabulary and makes automatic system transfer of the search strategy from one file to another much more successful.

Finally you can combine words from different fields. For example, if you have retrieved all kinds of irrelevant material because of words in the abstract that are out of context, you can eliminate this field by specifying to the system that you want to search only the words in the title and index terms fields. (See Table 5.)

Thus for a subject search of any online database there are a number of possible approaches, broad or narrow. (See Table 6.)

Occasionally it is desirable to search other fields. Having at some earlier time printed references in a short format, a user may wish to see selected abstracts as well. In this case you can search the corresponding accession numbers (see Table 7), and have only the abstracts, or the full reference, displayed.

You can search for author entries as well. In the Cold Regions database they are structured in an inverted format, that

is surname followed by one or more initials. (See Table 8). The colon following each initial indicates truncation, and allows for variations in spelling, spacing, or punctuation.

The author's affiliation (organizational source) is also a searchable element, but in this particular database not every record contains an entry in this field; therefore you may not obtain comprehensive results searching this field alone. In Table 9 I was trying to locate items published by the Department of Indian and Northern Affairs, so I used two words that would occur in every case. One nice thing about the Cold Regions file is that very few abbreviations are used in the author affiliation field; therefore, unlike many other files, you do not have to search every possible abbreviation to ensure full retrieval.

You can restrict a search to a particular document type. In Table 10 I have asked for any report written on pipelines and retrieved 119 documents.

You can also restrict a search by language, for example: anything written on construction equipment in English, as shown in Table 11.

A search can also be restricted by classification code, as in Table 12.

Other search elements include publication date, specific file segment (Antarctic Bibliography or CRREL bibliography), and update code, for running SDI searches on the quarterly file updates (Table 13).

This very briefly shows the multiple access points to individual records in the Cold Regions file. It is the searcher's job to take advantage of these by finding the maximum number of ways to express a question to the file.

ORBIT has the ability to take a question addressed to it on one file and repeat it on successive files very efficiently and very quickly. This helps overcome the problems of multi-disciplinary coverage in a simple and economical manner.

I was asked to comment on and give you ideas of the kinds of information that would be useful in different databases on ORBIT. I think that one develops an instinct with system use. I would suggest virtually every file has applications. For example, AGRICOLA, BIOSIS, CAB, CAS, FSTA for information on plants, crops, growing seasons and conditions, food preservation, nutrition in isolated communities, effects of extremes of light and darkness, etc. You can use files like ERIC, PSYCHABS, BIOSIS, and SPORT for information on problems of isolation, for the psychological effects of light and darkness, etc. The business and news files provide information on specific companies working up north, products and equipment being used there and legislation on environmental and social issues. There are limitless

applications for all the technical and engineering files: emergency communications systems in remote areas, offroad vehicle design, new fabrics, resource development technology, the effect of temperature on materials, waste and sewage systems, etc. One of the keys to seeking information in your field is surely to distinguish what subjects are peculiar to the north and what subjects or problems do not have a geographic point. For example, a study found that prisoners in North Vietnam have reactions to stress that were also found in people working in the north. So, if you were looking for problems associated with isolation, the search strategy should probably not be qualified with the word north or by any political or geographic boundary.

For searches requiring a geographic limitation, this list must be familiar: use all the unit terms (Yukon, Beaufort, Mackenzie Valley, Arctic); make sure a general term like "north" or "northern" is adjacent to Canada (to avoid "North York", etc.); in addition, use, if appropriate, terms like tundra, permafrost, periglacial, etc.. Finally, bear in mind that some flora and fauna are peculiar to cold regions, and therefore need no geographic limiter. You will probably have more success retrieving recent material, given the higher profile northern regions have gained of late.

As with any search, you will always retrieve some irrelevant material along with the good, given the machine's inability to understand context, metaphor or simile. It has been suggested that the amount of relevant material in the various files would be improved by better geographic indexing and the addition of some pertinent journals. I would suggest, based on positive experiences in other cases, that database producers would be receptive to a presentation of your problems and recommendations.

Q. What is your relationship to SDC?
A. Infomart is separate and independent of SDC. We have a contract with them to represent ORBIT in Canada.

TABLE 1

SUBJECT SEARCHING

COMPREHENSIVE: TITLES, INDEX TERMS AND ABSTRACTS

EXAMPLE: RESPONSE AND ISOLATION

PROG:

SS 1/C?

USER:

RESPONSE AND ISOLATION

PROG:

SS 1 PSTG (5)

USER:

ACCESSION NUMBER	00022176
TITLE	GENERALIZED RESPONSE TO PROTRACTED STRESS
AUTHORS	POPKIN, M.K.; STILLER, V.; HALL, R.C.W.; PIERCE, C.M.
SOURCE	MILITARY MEDICINE, JULY 1978-173(7), P.479-480, 12 REFS.
ISSUE	AB VOL. 11 ITEM 22176
DOCUMENT TYPE	J (JOURNAL ARTICLE)
LANGUAGE	ENG
CATEGORY CODES	*H (MEDICAL SCIENCES)
INDEX TERMS	PSYCHOLOGY; PHYSIOLOGY-HUMAN; ACCLIMATIZATION; ISOLATION EFFECTS
ABSTRACT	THE AUTHORS DELINEATE THE SIMILARITY OF PREVIOUSLY DISPARATE GROUPS, PRISONERS OF WAR RELEASED FROM NORTH VIETNAM AND ANTARCTIC WINTERING PERSONNEL. THE CONSONANCE OF THE CHANGES IN THE TWO GROUPS, EACH EXPOSED TO A PROTRACTED STRESS SITUATION, IS DISCUSSED WITH REGARD TO SEVERAL EXISTING THEORIES OF STRESS RESPONSE. THE RESULTANT CONSTELLATION IN THE TWO GROUPS IS REGARDED AS A MAXIMAL ADAPTATION TO UNREMITTING STRESSORS. THE AUTHORS SUGGEST THE OBSERVED CHANGES REPRESENT A GENERALIZED RESPONSE A PREDICTABLE BEHAVIORAL FINAL COMMON PATHWAY IN SITUATIONS OF PROTRACTED STRESS. (AUTH.)

TABLE 2

TITLES ONLY: FOR A PARTICULAR TITLE
QUICK-AND-DIRTY SEARCHES

EXAMPLE: RESPONSE/TI AND STRESS/TI
-OR-
/TI RESPONSE AND STRESS

PROG:
SS 2/C?
USER:
/TI RESPONSE AND STRESS
PROG:
SS 2 PSTG (5)
SS 3/C?
USER:

ACCESSION NUMBER	00022176
TITLE	GENERALIZED RESPONSE TO PROTRACTED STRESS
AUTHORS	POPKIN, M.K.; STILLER, V.; HALL, R.C.W.; PIERCE, C.M.
SOURCE	MILITARY MEDICINE, JULY 1978-173(7), P.479-480, 12 REFS.
ISSUE	AB VOL. 11 ITEM 22176
DOCUMENT TYPE	J (JOURNAL ARTICLE)
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CATEGORY CODES	*H (MEDICAL SCIENCES)
INDEX TERMS	PSYCHOLOGY; PHYSIOLOGY-HUMAN; ACCLIMATIZATION; ISOLATION EFFECTS
ABSTRACT	THE AUTHORS DELINEATE THE SIMILARITY OF PREVIOUSLY DISPARATE GROUPS, PRISONERS OF WAR RELEASED FROM NORTH VIETNAM AND ANTARCTIC WINTERING PERSONNEL. THE CONSONANCE OF THE CHANGES IN THE TWO GROUPS, EACH EXPOSED TO A PROTRACTED STRESS SITUATION, IS DISCUSSED WITH REGARD TO SEVERAL EXISTING THEORIES OF STRESS RESPONSE. THE RESULTANT CONSTELLATION IN THE TWO GROUPS IS REGARDED AS A MAXIMAL ADAPTATION TO UNREMITTING STRESSORS. THE AUTHORS SUGGEST THE OBSERVED CHANGES REPRESENT A GENERALIZED RESPONSE, A PREDICTABLE BEHAVIORAL FINAL COMMON PATHWAY IN SITUATIONS OF PROTRACTED STRESS. (AUTH.)

TABLE 3

INDEX TERMS: CONTROLLED VOCABULARY, FREE LANGUAGE ADDITIONS, AND GEOGRAPHIC TERMS

EXAMPLE: ACCLIMATIZATION/IT
ISOLATION EFFECTS

PROG:
SS 3/C?
USER:
ISOLATION EFFECTS AND ACCLIMATIZATION/IT
PROG:
SS 3 PSTG (31)
SS 4/C?
USER:

ACCESSION NUMBER	00022176
TITLE	GENERALIZED RESPONSE TO PROTRACTED STRESS
AUTHORS	POPKIN, M.K.; STILLER, V.; HALL, R.C.W.; PIERCE, C.M.
SOURCE	MILITARY MEDICINE, JULY 1978-173(7), P.479-480, 12 REFS.
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TABLE 4

INDEX TERM WORDS: WORDS THAT ARE THE COMPONENTS OF INDEX TERMS

EXAMPLE: ISOLATION/IW AND HUMAN/IW

-OR-

/IW ISOLATION AND HUMAN

PROG:

SS 4/C?

USER:

/IW ISOLATION AND HUMAN

PROG:

SS 4 PSTG (45)

SS 5/C?

USER:

ACCESSION NUMBER	00022176
TITLE	GENERALIZED RESPONSE TO PROTRACTED STRESS
AUTHORS	POPKIN, M.K.; STILLER, V.; HALL, R.C.W.; PIERCE, C.M.
SOURCE	MILITARY MEDICINE, JULY 1978-173(7), P.479-480, 12 REFS.
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TABLE 5

SEARCHING TITLES AND INDEX TERM WORDS AT THE SAME TIME (IN EFFECT, ELIMINATING THE ABSTRACTS)

EXAMPLE: HUMAN/TI,IW AND STRESS/TI,IW

-OR-

/TI,IW HUMAN AND STRESS

PROG:

SS 5/C?

USER:

/TI,IW HUMAN AND STRESS

SS 5 PSTG (8)

SS 6/C?

USER:

ACCESSION NUMBER	00022176
TITLE	GENERALIZED RESPONSE TO PROTRACTED STRESS
AUTHORS	POPKIN, M.K.; STILLER, V.; HALL, R.C.W.; PIERCE, C.M.
SOURCE	MILITARY MEDICINE, JULY 1978-173(7), P.479-480, 12 REFS.
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TABLE 6

SUBJECT APPROACH TO SEARCHING

1) COMPREHENSIVE:	SINGLE WORDS NO QUALIFICATION REQUIRED ORBIT AUTOMATICALLY LOOKS EVERYWHERE TITLES INDEX TERMS ABSTRACTS
2) TITLES:	SINGLE WORDS ORBIT SEARCHES FOR CO-OCCURRENCES OF TERMS IN THE TITLES ONLY
3) INDEX TERMS	CONTROLLED VOCABULARY ORBIT SEARCHES FOR A MATCH BETWEEN THE INPUT TERMS (SINGLE TERMS OR PHRASES) AND THE TERMINOLOGY IN THE INDEX TERM FIELD OF EACH REFERENCE
4) INDEX TERM WORDS	SINGLE WORDS ORBIT SEARCHES FOR CO-ORCCURRENCES OF TERMS ANYWHERE IN THE INDEX TERM FIELD
5) ANY COMBINATION OF THE ABOVE	SEARCHABLE ELEMENTS MAY BE USED IN COMBINATION TO ACHIEVE THE DESIRED RESULTS FOR EXAMPLE, TITLES AND INDEX TERM WORDS CONSIDERS 2 OF THE TEXT FIELDS, BUT ELIMINATES THE ABSTRACTS FROM THE SEARCH, WHICH CAN BE USEFUL IF TOO MANY 'FALSE DROPS' ARE RETRIEVED

TABLE 7

ACCESSION NUMBER:	BEGINNING WITH	00nnnnnn	ANTARCTIC BIBLIOGRAPHY
	BEGINNING WITH	NNnnnnnn	BIB. ON COLD REGIONS

EXAMPLE: 34001767/AN

PROG:
SS 6/C?
USER:
34001767/AN
PROG:
SS 6 PSTG (1)
USER:
PRT FULL INDENTED
PROG:

ACCESSION NUMBER	34001767
TITLE	SYMPOSIUM ON HUMAN SETTLEMENT PLANNING AND DEVELOPMENT IN THE ARCTIC
ORGANIZATIONAL SOURCE	UNITED NATIONS. ECONOMIC COMMISSION FOR EUROPE. COMMITTEE ON HOUSING, BUILDING AND PLANNING
SOURCE	C455P., IN ENGLISH AND RUSSIAN., GODTHAB, GREENLAND, 1978
DOCUMENT TYPE	MON (MONOGRAPH)
LANGUAGE	ENG, RUS
INDEX TERMS	UTILITIES; BUILDINGS; COLD WEATHER CONSTRUCTION; PERMAFROST BENEATH STRUCTURES; MINING; FOUNDATION
ABSTRACT	PARTICIPANTS FROM DENMARK, CANADA, SWEDEN, NORWAY ICELAND, FINLAND, UNITED STATES AND THE USSR MET IN GODTHAB IN AUGUST, 1978 TO ADDRESS THREE MAJOR TOPICS: PHYSICAL PLANNING AND LAYOUT OF SETTLEMENTS PROGRAMMING, DESIGN AND CONSTRUCTION OF ENGINEERING INFRASTRUCTURE FACILITIES AND PROGRAMMING, DESIGN AND CONSTRUCTION OF HOUSING AND RELATED SOCIAL SERVICES FACILITIES.

TABLE 8

AUTHORS: INVERTED FORMAT: SURNAME FOLLOWED BY INITIALS

EXAMPLE: POPKIN, M:K:/AU

PROG:
SS 7/C?
USER:
POPKIN, M:K:/AU
PROG:
SS 7 PSTG (2)
USER:
PRT TI
PROG:
-1-
GENERALIZED RESPONSE TO PROTRACTED STRESS
-2-
NOVEL BEHAVIORS IN AN EXTREME ENVIRONMENT

TABLE 9

ORGANIZATIONAL SOURCE (AUTHOR AFFILIATION)

EXAMPLE: CANADA/OS AND NORTHERN/OS

-OR-

/OS CANADA AND NORTHERN

PROG:
SS 8/C?
USER:
/OS CANADA AND NORTHERN
PROG:
SS 8 PSTG (7)
USER:
PRT TI OS 2
PROG:
-1-
TI - REGIONAL IMPACT OF A NORTHERN GAS PIPELINE. VOL.7. ANALYSIS OF OVERALL TERRITORIAL IMPACTOF A THROUGH GAS PIPELINE
OS - CANADA. DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT; MPS ASSOCIATES LTD
-2-
TI - REGIONAL IMPACT OF A NORTHERN GAS PIPELINE. VOL.4. IMPACT OF PIPELINES ON SELECTED TERRITORIAL COMMUNITIES
OS - CANADA. DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT: MPS ASSOCIALTES LTD

TABLE 10

DOCUMENT TYPE

EXAMPLE: REPORTS ON PIPELINES

ALL PIPELINE# AND R/DT

```
PROG:
SS 9/C?
USER:
ALL PIPELINE# AND R/DT
PROG:
SS 9 PSTG (119)
SS 10/C?
USER:
PRT 2 TI DT
PROG:
-1-
TI - POTENTIAL INTERACTIONS BETWEEN PIPELINES AND TERRAIN IN A
     NORTHERN ENVIRONMENT
DT - R (REPORT)
-2-
TI - AUGMENTATION OF EARTH HEATING FOR PURPOSES OF ROADWAY DEICING--
     FINAL REPORT
DT - R (REPORT)
```

TABLE 11

LANGUAGE:

EXAMPLE: REFERENCES TO CONSTRUCTION EQUIPMENT WRITTEN IN ENGLISH

CONSTRUCTION AND EQUIPMENT AND ENG/LA

PROG:
SS 10/C?
USER:
CONSTRUCTION AND EQUIPMENT AND ENG/LA
PROG:
SS 10 PSTG (271)
SS 11/C?
USER:
PRT 2 TI LA
PROG:
-1-
TI - DEVELOPMENT TEST II (DT II) (PQT-G) (COLD WEATHER ENVIRONMENT)
OF THE FAMILY OF MILITARY ENGINEER CONSTRUCTION EQUIPMENT (FAMEC
LA - ENG
-2-
TI - INVESTIGATION OF THE BEARING CAPACITY OF PILES DRIVEN INTO
PLASTIC FORZEN SOIL
LA - ENG, RUS

TABLE 12

CATEGORY CODES:

EXAMPLE: REFERENCES ON ROADS OF INTEREST TO COMPANIES INVOLVED IN THE SHIPMENT OF GOODS AND THE PROVISION OF SERVICES IN COLD REGIONS.

(ALL ROAD# OR ALL HIGHWAY#) AND G/CC

(WHERE G REPRESENTS LOGISTICS, EQUIPMENT AND SUPPLIES)

PROG:
SS 11/C?
USER:
(ALL ROAD# OR ALL HIGHWAY#) AND G/CC
PROG:
SS 11 PSTG (51)
SS 12/C?
USER:
PRT 3 TI CC

(THE SAME SEARCH WITHOUT THE CC QUALIFIER RETRIEVED 2013 REFERENCES)

-1-
TI - PUBLIC WORKS DEPARTMENT, (DEEP FREEZE) 78
CC -*G (LOGISTICS, EQUIPMENT AND SUPPLIES)
-2-
TI - SNOW TRANSPORT EQUIPMENT MODEL 1000 TOWED SNOWPLOW CARRIER
CC -*G (LOGISTICS, EQUIPMENT AND SUPPLIES)
-3-
TI - ROAD TRANSITIONS BETWEEN LAND, SNOW AND ICE
CC -*G (LOGISTICS, EQUIPMENT AND SUPPLIES); F (ICE AND SNOW)

TABLE 13

OTHER SEARCHABLE ELEMENTS:

PUBLICATION DATE

EXAMPLE: ISOLATION EFFECTS AND GREATER THAN 77

-OR-

ISOLATION EFFECTS AND FROM 78-80

****

FILE SEGMENT

EXAMPLE:

(DIURNAL OR DAILY) AND TEMPERATURE AND (ALL VARIAT: OR ALL FLUCTUAT:) AND A/FS

(yielded 42 references; without the file segment there were 78)

****

UPDATE CODES

EXAMPLE: PETROLEUM AND 8001/UP

****

Northerner's needs for northern information

Whitehorse, June 4-6, 1980

Northerner's needs for northern information

Pat Smith, Chief, Library Services of the N.W.T.

Greetings to everyone and regrets at not being able to attend the Colloquy, due to shortage of funds, but you will be hearing from at least two more people from the Northwest Territories: Jo-Anne Allison, the NWT Government In-Service Librarian and Jeannette Fish, Librarian at the Yellowknife Public Library.

When Garth asked me to give a paper on the theme of the Whitehorse segment of the colloquy and I found out that both Jo-Anne and Jeannette were going to be there, I suggested that it would be useful to have their direct input, because their experiences in Yellowknife are somewhat diffrent from the rest of the NWT. Volume alone must give a different perspective to Northerners' needs for northern information, so I am going to confine my comments to the expressed needs of northerners as experienced through NWT Public Library Services in the more remote communities.

It is a little difficult to sound very positive about Northerners' needs for northern information in a year in which there is virtually no money to meet those needs. However, it is this very lack of money which has shown up a rather interesting phenomenon:

It has always been our policy to subscribe to all the northern newspapers and newsletters for each member library. We thought that this would keep people in touch with what is happening in other communities, as well as, in a few instances, being a source for current material in Inuktituut, which is always in short supply. The whole of our book, periodical and A-V budget this fiscal year, is $22,000. We normally spend nearly $20,000 on periodicals alone. Consequently, we are having to cut in half, at least, our expenditure on periodicals. We have warned the member libraries and asked them to select the periodicals to be cancelled. Practically every one of the smaller communities is opting to have nearly all the northern newspapers cancelled. The exceptions are their own local community newspaper/letter and one or both of the Yellowknife papers, in order, presumably, to keep abreast of news affecting the NWT as a whole.

Another interesting incident which occurred in 1977: I was visiting Cape Dorset, on Baffin Island, in response to a request for a community library to be set up. The Berger Report of the Mackenzie Valley Pipeline Inquiry had been published earlier that year, in English and French, and had been made available by various means, including libraries, to communities in the Mackenzie Valley. The English version was, in fact, made basic stock for public libraries across the NWT. While on that first visit to Cape Dorset, I was talking through an interpreter to Kananginak, whom you may recognize as a famous print maker but

who, at that time, was also chairman of the Community Education Committee. It had been proposed that there should be a joint school and community library and that the community education committee should assume responsibility for it. Naturally Kananginak was interested in the types of materials which would be in the library, particularly in Inuktituut. I explained that we would put in whatever was available in print, which wasn't a great deal, but that I hoped we would be able to build up eventually, a collection of spoken Inuktituut, maybe translations of works in English, which would be particularly interesting. Kananginak said that he thought that the education committee should find money to increase the hours of the local librarian, in order that he/she could help the schoolchildren a couple of times a week and if there was any spare time, the librarian could spend it translating current news and information onto tape. He mentioned the Berger Inquiry Report particularly and said that all that had been sent out in Inuktituut was a one-page summary from the NWT Government Department of Information. Obviously, he was expressing his own and other Inuit's frustration at not being able to have access to far more of the report. As Nita will endorse, Mr Justice Berger's staff had limited ideas about how the transcripts from the community hearings etc. should be made available and to whom, so it is not surprising that it never occurred to them that Inuit people on the other side of the NWT might be vitally interested, not least from the point of view of land claims, and that an Inuktituut edition of the report was highly desirable. As an additional note, I should mention that only one request came in, for a community hearing, during the term of the inquiry. However, several requests have come in recently for replacement of one or the other volume of the final report, so some people are reading it with interest still and adding it to their home libraries!

I'd like to just touch on two current contributions to the flow of northern information:

The first is Mr. C. M. Drury's report, Constitutional Development in the Northwest Territories. The letter of submission indicated that it has been translated in full into eastern arctic Inuktituut and summarized on tape in eastern and western Inuktituut and all the relevant Dene Languages. The English version is basic stock in all member libraries and we are in the process of obtaining the Inuktituut edition and tapes. It remains to be seen what the use of the report will be. The preparation of it in terms of interviews and hearings was not as high profile as the Berger Inquiry was, with all the media exposure of the latter, nor is the end result as attractively packaged. Perhaps the most important factor affecting the ordinary Joe's interest will be that it doesn't say what he wanted to hear, whereas the Berger Report did, at least as far as a great majority of the Native people were concerned and a lot of the non-native also.

The second set of current material, which is still being distributed is that relating to the Norman Wells Oilfield and Pipeline Project. It is only right that this material should be immediately available to those communities affected. But I feel that very little of it, if any, will be read at the community level in the smallest places, where the impact will be the highest. One of the greatest disadvantages is the format - much of this type of information is so cumbersome to handle and it takes quite a degree of sophistication to be able to read layer maps, statistical charts, etc. These last two publications both lack something the Berger Inquiry Report had in abundance: visual appeal. Practically anyone going through that report could find a photograph of a person or place he or she could recognize, at least, if they were from the Mackenzie. In addition, the fullest use was made of all the media, with TV way out in front.

A final illustration: as part of the preparation of this paper, I called the Northern Heritage Centre to find out to what extent the reading room and archives generally are used, not so much interested in the Yellowknife usage as interest shown by people in other northern communities. David Leonard, the Archivist, was away so I spoke to Bob Janes, the Director of the Centre. The Reading Room and the Archives are getting a great deal of use: by letter and phone, as well as in person and enquiries come from both Southern and Northern Canada. Their photocopying and photographing services are being used to the limit. They have something like 25,000 historical photographs. Bob mentioned particularly in relation to the latter that a visiting group of students in wildlife preservation from the vocational training centre in Fort Smith, over for a workshop on awareness of and importance of preserving historical artifacts, were really excited about the photographs. Many of them recognized people from their own families and said that they would be back again to look at some more.

So, paradoxically, or logically, the needs for northern information expressed by northerners lead us to consider the unexpressed needs. The needs, perhaps that people are unaware of: information about developments and events which are going to affect their lives and homes must be expressed in ways which enter into their lives and homes. If oil and pipeline companies and those conducting surveys and inquiries are really serious about informing and consulting with the people of the north, then they must make sure that the people of the north, not just the leaders of the people, understand what is happening. Information must be conveyed graphically, by videotape, by slide and cassette programs, and, above all, by using the experimental satellite channels on television to reach into people's homes.

Finally, to touch briefly on the needs of new northerners, the outstanding gap in the information we can supply is up-to-date in-depth profiles of individual communities. Something more than brief tourist information without being a full-length history or socio-economic study. We get many requests for this

type of information and much of it is available, if only someone had time to research it and bring it all together. Both the Arctic Bibliography and the Boreal Institute's KWIC indexes are invaluable in this area.

I hope these remarks will not repeat too much of what you will hear in the next few days and, again, I must express my regret at not being able to be there in person to participate in what must be one of the most interesting colloquies.

Library Services to Yukoners

Jean Dirksen

What I propose to do in my talk today is to illustrate the role of the Library Services Branch, Yukon Territory, and to point out how we address ourselves to northerners' needs for information.

Bernard Ostry, Deputy Minister, Department of Communications, stated recently:

> "Information is power. Privileged groups by nature try to keep this power to themselves. In a democratic society, power belongs to the people, which is why the mechanics' institutes and the Carnegie libraries came into being, along with universal compulsory education. The modern public library exists to make information power available to every citizen."[1]

This is the raison d'être of Library Services branch.

To place the above in a practical context, to see the context in which library service is provided it is helpful to look at the nature of community settlement in the Yukon today. Garth Graham, Deputy Head of Department of Library and Information Resources, in a paper he delivered to the "Seminar on Human Settlements and Renewable Resources North of Sixty" in January 1978, emphasized that through transportation and communications technology, the Yukon has lost a great deal of its physical remoteness. We have a network of roads, airports, telecommunications, which centres on Whitehorse, and connects us to the rest of North America. Community settlement in the Yukon is essentially of four patterns:

1. the regional metropolis - Whitehorse
2. the single industry mining community
3. the highway service centre
4. the native settlement.

While our physical separation from the rest of North America may be minimal, our mental sense of separation and independence is strong. Decisions with enormous significance to our ways of life are made outside of our present physical and mental boundary. We live in an area which is highly visible on the North American stage as resource rich and wide open for development. With the escalation of pace of northern development, Yukon's demand to increase its control over its own progress grows, as does the concern of its citizens to ensure their local autonomy in the face of centralization of decision making in Whitehorse.

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[1] "The Information Revolution - Hard Choices for Canada's Future, Canadian Library Journal, April 1980.

Within the above setting, the key components to library service in the Yukon are:

1. Decentralization of decision-making, to acknowledge and foster local autonomy - via community library boards.

2. Role of each outlet as a community information centre.

3. Role of library as centre of community cultural, recreational, adult and continuing education.

4. Multi-media services - access to materials in variety of formats.

5. Integration of school and public library service to maximize use.

6. Centralization of support services in Whitehorse (regional metropolis).

These components are embodied within the five programme areas of the Library Services Branch:

1. Community Services
2. Audio-visual Services
3. School Services
4. Whitehorse Public Library
5. Technical Services

In six communities, we have decentralized decision-making through the establishment of locally elected library boards. These communities are Dawson, Mayo, Elsa, Faro, Haines Junction, Watson Lake. Each of these communities is unique. Some face pipeline-related issues, some are mining communities, some are jump-off points for mineral exploration. Library boards determine hours and types of service, are responsible for hiring and supervision of staff, and set policy for library service in their communities. Consultation and advice is provided by Library Services Branch. Our intent is to encourage local control and self-reliance. Our Community Services Librarian, chief liaison with communities, consistently assists library boards to realize their potential in the community. To consolidate the library board's role in the community, an on-going programme of education is needed, as is the drafting and passing of regulations.

However basic the service we deliver in any Yukon community, we attempt to emphasize the library as a community information centre, as the first step in the information acquisition process. In the six aforementioned communities we have branches, in which we house small reference and government document collections, data on current local development, and a recreational reading selection. In our consultation process, we encourage self-reliance - training the staff, and training them to train the public. Our Community Services Librarian does not play an

advocacy role, nor do we advise community staff to play this role. Rather we emphasize self-help and self-reliance, to realize the concept that people can influence decisions. The establishment of an ongoing training programme is very important.

In communities where branches do not exist, we provide book stations, which consist of several hundred books and, in the near future, a few basic reference sources. At present, book stations are staffed by volunteers sought out and trained by the Community Services Librarian. These are set up in schools, post offices, community centres - any place we can find that's accessible. Also, we provide small deposits in various out of the way spots such as mining and construction camps. Recently, we began to set up paperback racks in places such as band offices, local stores, which give us visibility as a source of information.

The cultural, adult and continuing education dimension of Yukon life is one which we try to coordinate through library boards. Our branches do well in this area, initiating programmes, exhibits, classes, local community newspapers. Our flagship in this activity is the Faro library, an integrated school/public library, whose board chairman also chairs the recreation board and sits on town council, thus developing a broad based library role. We cost share, with Town of Faro, the salary of an adult education co-ordinator, whose base of operation is the library.

Wired as we are to the world of modern mass communication, our information service is provided in a variety of media formats. The head of media services does a great deal of work in the communities, training staff and public in the use and potential of audio-visual facilities. Multi-media service has enormous potential for development in many areas - literacy, cross-cultural service, telecommunications, training our communities in using modern technology, to be masters of hardware rather than intimidated by it.

In spreading service to a small population over a very large area, we can not afford duplication. Thus, we have integrated the acquisition, bibliographic control, and delivery of materials to both school and public libraries within the Library Services Branch. Through the union catalogue, which encompasses both school and public library holdings and the northern titles held by Yukon Archives, we are able to maximize use of materials through inter-library loan within the Territory. Facilities are shared in some communities through housing of some book stations in schools and complete integration of the school and public library in Faro. We will in the near future be opening a Learning Resources Centre which will integrate service delivery of audio-visual materials and instructional resources to schools and public.

Support services are centralized in Whitehorse. Whitehorse Public Library, in addition to fulfilling a full-fledged community branch role, also functions as Yukon's central library.

It houses the union catalogue, a relatively extensive reference collection, and with the largest general collection in the Territory is used as interloan back-up. Interloan services are delivered from the technical service unit, providing anyone, anywhere in the Yukon with access to information service.

I have, of course, given the "full half of the glass" in my summary. We have a plenitude of areas which need attention, especially in training, collections development, policy formulation, native service, and legislation, to name a few. Still, we have done, well, given our relative newness as an institution, our budgetary limitations, the rapid rate of change we are presently undergoing. With the heterogenous, sometimes polarized character of the Yukon we've had to be many things to our people. It is the characteristic Yukon resourcefulness of our staff and the committment of our communities which gives me the optimism to look at the "full half of the glass."

Yukon Archives and Records Services

Linda Johnson, Territorial Archivist

Yukon Archives & Records Services is the division of the Department of Information Resources which is responsible for a wide variety of information specifically related to and most often generated in the Yukon.

Yukon Archives is the public archives of the Territory resembling the provincial archives in the south and following in the unique Canadian tradition of "total archives", meaning we acquire, preserve and make available records ranging through every media type from traditional paper records to cine and video film. As well these records derive from numerous sources - the Yukon Government being our first responsibility, but also we have records from private individuals and families plus corporate bodies including the White Pass and Yukon Route, the Anglican Church and various community organizations. The archival records are complemented by a very comprehensive imprint collection of 7,000 volumes and a pamphlet collection of 3,000 items, including not only historical and rare books but current scientific and development literature such as pipeline proposals, wildlife impact studies etc. In fact the imprint collection serves a broad range of scientific and socio economic interests in the Yukon, sometimes quite separate from the archival services. More on that later.

The Records Services side of YARS exists in the first instance to provide service to current government departments and agencies by applying modern records management techniques to develop efficient information systems composed of the records of government. We operate seven records stations, each serving a variety of departments, where trained records personnel apply uniform procedures to incoming correspondence and records generated in departments. To ensure necessary action is undertaken, information is circulated to those requiring it, and stored in a manner to permit future reference. Beyond the current daily services the records management program provides low cost records center storage for series that have fulfilled current uses but are required to be kept for longer periods. All records are scheduled, meaning they are analysed to determine long term values, then the schedule, which is a legal document, is signed by the department, the Territorial Treasurer, Legal Advisor, and Territorial Archivist. The schedule indicates the ultimate disposition of the record series - so many years at the Records Center, possibly a micrographic application, then to the shredder or Archives. This provides a documented and coordinated approach to identifying, organizing, and monitoring the Government's most vital information system. The objective is to manage records of the Government efficiently and economically - to systematically destroy series once they have fulfilled their purpose and preserve series with long term values in appropriate storage conditions.

All of these processes provide positive ongoing benefits to the Government itself, but they also have important consequences for the Yukon public. Obviously efficient record keeping promotes more efficient administration of public business. As well there is a growing desire and demand for direct public access to government data which has culminated in strong freedom of information legislation in the United States, and which is being widely debated in this country in anticipation of similar Canadian and provincial legislation. However freedom of information ultimately depends upon the ability of the government to identify and produce the relevant items - efficient records management is the means to ensure that capacity. Our Archives Ordinance stipulates that no one may destroy or remove government records without the knowledge and concurrence of the Archivist, and the scheduling process provides permanent documentation of the rationale for keeping or destroying any record series. We do not have freedom of information legislation in the Yukon as yet, but there are public regulations for access to public records which indicate that anyone may request access to any record - the decision to grant or deny the request is made through consultation with the appropriate department personnel and the Archivist. A person requesting access can obtain assistance from Archives and Records staff in determining what records exist and where, pertaining to this request. If access is granted the Archives Reading Room provides supervised use of the record.

The combined Archives and Records Services provides a continuum for Yukon Government records that can serve Yukoners and others very well. However government records form only one part of the information required here. Until the establishment of the Yukon Archives in 1972 there was no comprehensive centre for any type of research in the territory. There were scattered fragments of imprint collections in various federal and territorial offices, and a small Yukon collection in the Whitehorse Public Library. Since the opening of the Archives in 1972 there has been a deliberate attempt to create an all embracing Yukon information centre to serve not only the traditional historical researcher but the many faceted information requirements of Yukoners. This broad role has necessitated tremendous versatility and commitment on the part of the Archives staff and sometimes has created awkward division of duties and an unbalanced approach to our overall objectives and responsibilities. However the rapid growth in numbers of researchers is a clear indication that the service is needed and is fulfilling the demands of a wide variety of people. Previously Yukoners had to travel long distances at great expense to consult archival sources pertaining to this area that were scattered in institutions throughout Canada and the United States. With the opening of the Yukon Archives not only were many of these farflung sources copied and thus made available here, but a vast number of present and former residents began to offer their family papers, photographs and other documentation to be preserved in the new fire proof secure vault. Very quickly the out flow of Yukon's documentary heritage was reversed. The

Archives was the first and today remains the only territorial heritage institution, and the only heritage facility in the Yukon with environmental controls and full time professional staff.

There was very widespread acceptance of this new institution, no doubt fostered by the friendly community oriented service implemented by the first Archivist and his staff. From the first, researchers using the Archives have included many varied interests and disciplines - historians of course, both academics and historic site planners; teachers and students from every community; local families, especially native people seeking photographs of their ancestors and evidence of traditional lifestyles; decendants of Gold Rush stampeders looking for records of that great adventure; miners and prospectors seeking clues to new riches in old documents; authors and filmakers from as far away as Europe, South America and Australia; native organizations gathering documentation for land claims negotiations; and many others. In addition to reference services in the public reading room, we also respond to written inquiries, and requests for copying via the interlibrary loan system. We are limiting the amount of time spent to do research for these requests now, concentrating instead on providing suggestions of relevant sources and a list of local researchers for hire to those who cannot make a personal visit to the Reading Room. This frees more staff time for processing our very large backlog of acquisitions. We offer a map copying service, and a photograph order service, as well as photocopying to facilitate the work of researchers.

The Archives has sponsored numerous special events including Yukon Potpourri, which was a series of Sunday evening lectures during the winters of 1975-78 concerning a variety of historical and other Yukon themes. We utilized local speakers, interspersed with rare Yukon film footage and photographs to present such topics as the history of agriculture in the Yukon, the building of the Alcan Highway, traditional native winter survival techniques etc. Potpourri has been our most successful public programming venture to date, attracting audiences of 200 and more during winter temperatures of 40 below. CBC taped the sessions and broadcast them during the week so that people in outlying communities also enjoyed them. It was an exhausting effort for our small staff however, and we were glad to see a new Yukon Historical and Museums Association develop which would organize similar programs while we retired Potpourri. We continue to provide some support to the Association to organize its periodic heritage conferences and newsletter, but YHMA and local museums now provide the lead role in sponsoring historical lectures and special events such as historic walking tours.

Our other major public event has been an annual thematic display exhibiting copies of photographs, maps and other documents. The display items are drymounted on simple cardboard backing and are of a size to fit into 20" x 24" boxes that are easily shipped to any community in the Yukon or farther afield.

Archives staff travel to outlying communities on request of local organizations to set up these displays and usually take along some of our historic Yukon films to show as well. In this way many more Yukoners than would normally make use of an archives have a chance to encounter their documentary heritage. In turn many of them produce additional items for us to preserve, often having been awakened by these presentations to the wider value and interest their own family photos and records might hold.

Visual documents such as photographs often prompt people to pursue more intensive research and our photograph finding aid which is available through the library system has been very successful from that perspective, especially in schools. It was developed in cooperation with MacBride Museum and the Xerox Corporation and again utilizes a simple format that can be used by anyone anywhere. Our 8" x 10" reference prints were photcopied along with the appropriate card catalogue entry giving identification information and these sheets were then placed in binders for reference. Several sets were made for the Yukon, one of which circulates via the regional interlibrary loan system. Thus people from Old Crow to Watson Lake can make use of the photograph collections in their own community.

During the frantic days of the Alaska Highway Pipeline Inquiry our Reading Room became the research centre for scores of people from government, the pipeline industry and public interest groups. Although we were a relatively new institution, careful and comprehensive acquisitions in the early years now provided these organizations with a wide variety of Yukon sources together in one location - and some of the pipeline researchers had very little time for research, let alone to travel in search of sources. The previous fall we had delayed filling a vacant archivist position and hired a librarian on contract to begin cataloguing our mountainous imprint backlog, anticipating that some type of Yukon inquiry might emerge after the Berger Inquiry report. However, we were still not prepared for the onslaught of the summer of '77 and our limitations caused some problems for staff and public alike. We had one non circulating copy only of Yukon publications and at times there would be half a dozen eager researchers wanting the same item. Even our extended hours could not satisfy the more hurried projects. Moreover summer is traditionally the time of heaviest use of the Archives and our small Reading Room was often chaotic with standing room only in the afternoons. With all hands turned to public service and processing the most urgently required pipeline documents, our long range objectives were seriously undermined. The archival records especially suffered from lack of attention at this time, increasing an already large backlog of processing. The pressure did not end with the publication of the Lysyk Report, because there were several other groups studying various aspects of Yukon development and all generated an increasing need for socio-economic and scientific data. These demands began to create a serious imbalance in our imprint collections as historical items threatened to be crowded out of both acquisitions budget and

storage space. As well the majority of our staff were not trained to deal with scientific and socio-economic information and we had some problems meeting the needs of very sophisticated researchers. We had been able to respond to the immediate needs during the Lysyk Inquiry, which was fortunate since there were no Yukon based alternate sources of information, but we concluded that the Archives was not the appropriate place for long term and ongoing needs in these areas. Hopefully the much discussed Yukon Research Centre will include information of this type.

The Archives has been acting as a very rudimentary legislative library since its inception, preserving and making available copies of ordinances, journals, votes and proceedings, public accounts and other reports of the Yukon Council, now the Legislative Assembly. Again our small staff and budget prevents a comprehensive operation, but at least the basic government information is available to the public and legislators.

We have utilized traditional simple finding aids to present our sources to the public. The imprint collection is described using a card catalogue system, pamphlets have a rudimentary chronological catalogue, archival records are described by record group and series in loose leaf finding aids, maps on inhouse-produced map information cards. Many of our acquisitions have not been processed or described except in preliminary accession records, but we attempt to make these available to researchers as well so that important sources will not be missed by them due to our backlog. The Yukon Archives has participated in the compilation of the Yukon Bibliography produced by the Boreal Institute by contributing information on rare and local sources that come to our attention. The Bibliography is of great value to us in assisting researchers to locate pertinent sources by subject since our own cataloguing is so far behind.

In conclusion, our program is currently meeting a wide variety of the information needs of Yukoners, and also providing a comprehensive source of Yukon information for outside researchers. However we have serious issues to resolve in the near future with respect to redefining and probably narrowing our scope in order to fulfill the long term archival objectives which are our first responsibility.

Foothills (South Yukon) Community Liaison Process

Maureen Jensen, Foothills

First of all, what I would like to do is welcome all of you to Whitehorse. It's kind of neat to be sitting here in the north talking about the north.

I thought I would briefly outline the history of the community liaison and information functions that have been developed by Foothills Pipe Lines. I should stress that this system was developed as early as 1975 when the company first became active in the north. I want to say that if it had not been for senior management, and in particular, Bob Blair, President of Foothills at that time, it is doubtful that we would have a community liaison program remotely resembling our current program. Interestingly enough, Mr. Blair stays in Calgary and we stay here and do our thing and he does his thing, although we are always aware of his personal interest in the program. So far, we have not run at cross purpose. Indeed, we have met everybody's needs, and as I am sure you know, meeting the corporate needs of a major southern based corporation like Foothills while trying to meet the information needs of northerners is a formidable task. What makes the task so difficult is that you are expected to reconcile radically different perspectives, each governed by their own peculiar geographical, demographical, polictical and economic realities.

I agree with Garth Graham who spoke earlier, that information is power and we don't always get as much information as we should to the people. The traditional approach by major corporations has been to file all manner of paper and applications to the appropriate regulatory body where it promptly disappears from the public realm.

Communities and people have a right to that information and that is a fundamental tenet of our program. In Yukon, community libraries go a long way to providing access to previously unaccessable information. This is why you will find in the Yukon library system copies of all of Foothills public documents.

Our Community Relations Program is not only responsible for disseminating information but is also responsible for the preparation of that information. At the present time we publish Foothills Yukon Bulletin with a circulation of 12,000 throughout Yukon, N.W.T., Alaska and other parts of Canada and the U.S. In addition, we prepare and distribute special materials on demand such as project fact sheets, descriptions of current engineering, environmental and construction programs, news releases and materials published by others relevant to the project. Our project is precedent setting in that Foothills is required under the Northern Pipeline Act, specifically the Northern Pipeline Socio-Economic and Environmental Terms and Conditons for the Yukon Territory, to meet nineteen specific requirements contained

in those terms and conditions.

Our foremost objective therefore must be to meet those terms and conditions. That is the company's position. Ten years ago such a program could not have existed. Today, industry recognizes that such programs have a legitimate place in the system and are considered as important as engineering and construction to the success of the project.

In July 1977, immediately after the National Energy Board released Reasons for Decision on the northern pipeline which moved the pipeline out of the Mackenzie Valley and into the Yukon, I was asked by Foothills to assume responsibility for the community liaison function in Yukon. I had been employed in a similar capacity by Foothills in the Mackenzie Valley.

In September, 1977, I prepared a basic Working Paper for Foothills which presented a philosopy of approach which I believe is well suited to Yukon and Yukoners. Its basic premises were adapted from community development and adult education theory and practice.

I went in early 1978 to the communities and met individually with key, previously identified individuals, and after a long series of routing around in various communities and drinking a lot of tea, we reached a consensus that the way to proceed was to strike an ad hoc community pipeline committee in each community in the pipeline corridor. Unfortunately, we never got it together in Whitehorse. Whitehorse has such a diverse population with many publics and is not amiable to this type of organization. I am working with the committees in the smaller communities. They participate on a volunteer basis and do all the organizing in the community. I provide resources and our understanding is that Foothills is only a resource. They are to use us for their information needs. At the same time, Foothills will use these communities to validate their planning process. We cannot submit any plans to the Northern Pipeline Agency - the federal regulatory body - for approval until these plans have been ratified by the communities in the pipeline corridor. This is an incredible amount of power which these communities have; if they only knew how to use it.

We worked with these communities for about a year while Government of Yukon officials sat off on the sidelines and watched. After close scrutiny of my activities they were moved to remark "hey, these things are actually working". The department of Local Government then decided that they would like to encourage these committees to become, in effect, working committees of the elected municipal body thereby formalizing their position in the political system. Minor modifications have been made but today the approach remains essentially the same.

Thank you.

Information Generation, Public Participation and Water Resources Management in the Yukon

Peggy Eyre, Westwater Research Centre, University of British Columbia

The generation and communication of information has become an essential part of the decision-making process of modern democratic societies. As the socio-economic system became more complex and sophisticated, governmental activities have expanded to such an extent that almost every aspect of our daily lives is impacted in some way by government policy. In the course of formulating and implementing these numerous government policies, a tremendous amount of information must be generated and processed.

The expansion of governmental activities and informational requirements is not without consequence. In the post World War II period in North America, one of the major concerns in public administration has been determining how to reflect public preferences in both the large governmental policy decisions and in the day to day implementation of policy. In the early history of democracy, public preferences were communicated directly to elected political representatives during elections. However, with the expansion of governmental activities, the periodic election of representatives became an inadequate means of gauging public preferences with respect to specific policy issues. Other means had to be sought.

The type and form of information processed for the expanded decision-making arena reflects the attempts of government to resolve the problem of incorporting public preferences in the design and implementation of programs. For instance, during the 1950's and 60's, the development of sophisticated analytical techniques to evaluate alternative programs appeared to offer a rational means of weighing public choices and selecting the one which offered the maximum social benefit. The wide use of benefit-cost analysis exemplifies this pursuit of the rational decision which would best serve the "public interest."

Many of these sophisticated information-processing techniques are still part of the established practice of governments today. However, in recent years, there has been considerable disenchantment with the idea that technical analyses can determine whether a given proposal best serves the illusive "public interest." This has led to a growing interest in the development of information processing and communication procedures which involve consulting the public directly about preferences held.

In my presentation this morning, I would first like to examine the role that policy research or information generation plays in the democratic decision-making process. Secondly, I will attempt to highlight the role that the public should play in the

research or information processing phases of the governmental planning process -- if the information generated for decision-making is to reflect the preferences of the people who will be affected by the decision taken. Finally, I will illustrate how public preferences can be reflected in the information generated during policy research by describing a procedure that the Westwater Research Centre has been following in the conduct of its Yukon Water Resources Research Project.

I would like to emphasize that this project is experimental insofar as methods for incorporating public preferences in the information generated for decision-making are as yet poorly developed. We already have some ideas about how we would modify our procedures the next time round, but we would appreciate your reactions to what we are doing. Since libraries, like research centres, play an important role in gathering and presenting information to the public, our goals are complementary. Perhaps we at Westwater have overlooked the significant role that the library could play in communicating research results to the public. As I outline our research procedure today, I would ask you to consider how we might improve this procedure through a closer association with the library services in the community.

I. The Role of Policy Research or Information Generation In the Decision-Making Process.

1. The Nature of the Planning or Decision-Making Process

There was a time in the early history of democracy when government confined most of its activities to supplying public services, providing national defense and conducting international affairs. In other words, the regular functioning of government infrequently affected the daily life of the average citizen. However as our socio-economic system expanded and became more complex, government's role simultaneously expanded. Today, almost all of our daily activities are impacted in some way by government policy.

Formulating and implementing such a wide range of policies for a sophisticated socio-economic system is no simple task. In the first place, the amount of specialized knowledge required to develop policies for even one sector of government is substantial. This has meant that elected representatives have had to surround themselves with experts in various policy fields in order to secure advice. In the second place, the number of decisions which must be made daily with respect to the administration of government policies is overwhelming. This has resulted in both the proliferation of government administrative and regulatory institutions, and in the delegation of more decision-making powers to these government bodies.

The nature of the planning or decision-making process is thus defined by a complex series of interactions: government institutions interacting with one another; government institutions interacting with non-government organizations; non-government organizations interacting with one another; and both government and non-government institutions interacting with the natural environment.

For instance, the formulation and implementation of water pollution control policy in the Yukon would involve interactions among politicians, various branches of the federal Department of the Environment, any other government departments whose policies might be impacted -- the Yukon Department of Renewable Resources, or the federal Department of Indian Affairs and Northern Development, for example -- as well as the private mining corporations who discharge wastes into the water, the recreationists who use specific water ways, and the citizens or communities who depend on specific water sources. In short, the planning or decision-making process in modern democracies can be seen as a process of negotiation and compromise among a wide range of individuals and organizations.

2. The Nature of the Planning or Decision-Making Problem

The dynamics of the decision-making process defines the nature of the planning or decision-making problem. I would like to elaborate this point further by discussing two important dimensions of this problem. The first dimension relates to the need to generate diverse types of information which reflects not only the technical aspects of the policy question, but which also reflects the diverse preferences held with respect to how a particular resource should be managed. For instance, to return to our pollution control example, technical and biophysical data will be needed by government agencies in order to determine existing water quality and the effects of various levels and types of discharges on water quality. However, because policy decisions are a result of negotiation between the numerous actors in the decision arena, these technical and scientific data will not form the sole basis for the water quality standards eventually adopted.

On the one hand, mining corporations who would prefer, from an economic point of view, not to be obligated to meet stringent water quality standards, will be gathering their own biological and economic data. They will present the costs of reducing discharges to the government, and argue that beyond a certain level of processing of waste materials, it becomes uneconomic for them to remain in operation. Political representatives who would not wish to become unpopular with the electorate for creating economic hardships in a region, must consider this information presented by corporations.

On the other hand, recreationists might have different preferences with respect to the managment of water quality. While

polluted water would impair the enjoyment of recreational activities, water quality standards which are very stringent might affect recreational boaters as well as recreation-based economic activities. Therefore, in the course of policy negotiations, this group will wish to present information supporting their preferred policy alternative. This alternative may be different from that presented by either the scientists in the pollution control agency, or the industrialists representing the corporate group.

There will also be various other groups and agencies participating in the policy negotiations who have still different points of view. The Yukon Territorial Wildlife Branch, for instance, will wish to present information regarding the impacts of various levels of pollution on wildlife populations. Conservationists and community residents might also wish to present their positions.

In short, information required for policy negotiations is not "purely scientific" or universally accepted. Politicians, administrators, and other participants in a specific policy process will need to review and evaluate diverse types of information that is organized to support the preferences of the particular group presenting the information. Decision-makers will need to consider and balance these preferences and make policy decisions which, in their judgement, maximize the net benefits to those people impacted by a specific policy.

A second dimension of the planning problem which is related to the first, is the need to generate diverse types of information within the resource constraints -- especially financial and time constraints -- of the specific policy context. Information generation and communication, or policy negotiation sessions, can take a great deal of time. Decision-makers often cannot wait for the results of long term research studies before acting. In short, decisions must often be made on the basis of incomplete information. Given this fact, informational or investigation priorities must be set if the best possible decision is to be made within the practical constraints of the policy formulation process.

In summary, one could say that the planning or decision-making problem is a dialectical one. On the one hand, there is the concern to promote the optimal democratic process by ensuring that all interested individuals and groups are given the opportunity to present information which reflects their preferences. On the other hand, there is a need to deal with the substantive questions of a specific policy process within the temporal, financial and other resource constraints defining the policy context. Final policy choices are a result of the particular balance struck between policy process and substantive understanding for each specific policy area.

3. The Nature of Policy Research or Information Generation

Unlike pure academic research, which seeks to advance knowledge for its own sake, policy research is specifically designed to serve the policy decision-making process. Information generated during policy research is intended to be relevant and useful to participants in policy negotiations, as well as to help decision-makers make the necessary choices between alternative courses of action. Thus policy research, in the broadest sense, might be seen as part of the decision-making process.

Since policy research is meant to advance public decision-making processes, it must address the dialectical nature of the planning or decision-making problem. This means that policy research is concerned with promoting a better policy process, as well as with supplying substantive or technical research studies.

The way in which information is generated, processed and communicated is a major concern in policy research. On the one hand, because the decision-making problem involves the weighing of diverse preferences for various policy choices, policy research must consider the effects of these preferences on technical policy options. On the other hand, the resource constraints of a given policy context which result in the establishment of informational priorities will require that investigation priorities likewise be established in policy research.

Westwater Research Centre which is affiliated with the University of British Columbia is essentially a policy research institution. This means that Westwater is concerned both with improving the Canadian decision-making process, and with generating relevant and useful technical information to advance specific policy processes. Moreover, in addressing the nature of the planning problem, Westwater must consider the range of preferences in a policy context, and establish investigation priorities which reflect the resource constraints of the decision-making process.

However, this does not mean that Westwater, as an academic organization, should take sides in a given policy context. The need to consider the range of preferences in a policy process reflects the need to produce information which is relevant and useful to the particular policy context. The fact that Westwater has no decision-making capabilities with respect to policy choices means that it can remain neutral. Nevertheless, as is evident in our discussion of the modern decision-making problem, the various types of information generated shape the character of the final decision. Research institutions such as Westwater can, therefore, have a great influence on the policy process through the generation of relevant information.

II. The Role of the Public in Policy Research

1. The Role of the Public in the Decision-Making Process

The "public" is not, nor has it ever been, a homogeneous group of voters. As a consequence, reflecting the "public interest" in policies has always involved the weighing of the diverse preferences of the electorate in light of the technical alternatives available, and subsequently the choosing of that policy which appears to offer maximum net benefits to the public.

In the early history of democracy, this was done intuitively by the elected representative who maintained informal contacts with the electorate. However, as government evolved, such informal communications became inadequate given the large populations of constituents, the enormous amount of information which had to be reviewed in the course of the policy process, and the distances which often separated decision-makers from the electorate.

In sum, the periodic election of political representatives has become an inadequate means of gauging public preferences with respect to specific policy issues. Nevertheless, because the democratic form of government is founded on the premise that the electorate should effectively control government policy, more deliberate procedures are required to assess the range of public preferences in modern democracies.

2. The Role of the Public in Policy Research

The role of the public in policy research or information generation for decision-making is related to the nature of the decison-making problem which was described previously. On the one hand, the full range of diverse public preferences whould be represented in the information generated for decision-making; on the other hand, investigation priorities have to be established. Moreover, although there are technical policy areas which must be researched, the range of preferences which enter a specific policy context and the establishment of investigation priorities are achieved only as a result of the dynamics of the policy process.

To illustrate this point, let us turn once again to our example of establishing pollution control guidelines. If, for instance, only the government agencies and private corporations were involved in policy negotiations, the pollution control guidelines established as a result of negotiations are likely to be different than if recreationists, conservationists and community residents had been involved as well. By excluding the later groups from the policy process, none of the information which would have been presented by these groups was reviewed and evaluated. Thus the process determined not only which preferences entered the policy process, but also which technical data were

presented for consideration. This amounts to establishing investigation priorities relevant only to the small number of participating groups.

In the post World War II period in North America, one of the major concerns has been determining how to reflect the full range of public preferences in both the large governmental policy decisions and in the day to day administration of policy in modern, complex democracies. While it was recognized that the more points of view and the more types of information that entered the decision-making context, the better would be the policy output, it was also recognized that time constraints prevent the inclusion of every member of the public in the policy process. In response to this dichotomy, numerous analytical techniques -- e.g. benefit-cost analysis -- were developed as a means of helping politicians evaluate policy choices from the point of view of maximizing net benefits to the public.

Many of these sophisticated information processing techniques are still part of the established practice of government today. However, in recent years, there has been considerable disenchantment with the idea that technical analyses can determine whether a given proposal best serves the illusive "public interest."

This growing disenchantment with the ability of analytical techniques to reflect accurately the preferences of the public has led to the more recent interest in the development of information processing and communication procedures which involve consulting the public directly about preferences held. This disenchantment is what prompted Westwater to explore new procedures for reflecting public preferences in policy research.

III. Westwater's Yukon Water Resources Research Project

Westwater designed its Yukon Research Project particularly to respond to the nature of the planning or decision-making problem which characterizes modern democratic societies. In other words, the process of establishing investigation priorities and generating information for decision-making was designed to reflect the range of preferences held in the Yukon with respect to how development should proceed.

Figure 1 illustrates the overall design of the Yukon Project and highlights the ongoing role that the Yukon public will play at various phases in the research. As I mentioned previously, in responding to the nature of the democratic decision-making problem, there are both procedural and substantive or technical aspects of policy research which must be considered. The overall Yukon Project is actually a research process which extends over approximately a year and a half. The substantive or technical areas of policy research which are to be undertaken during the

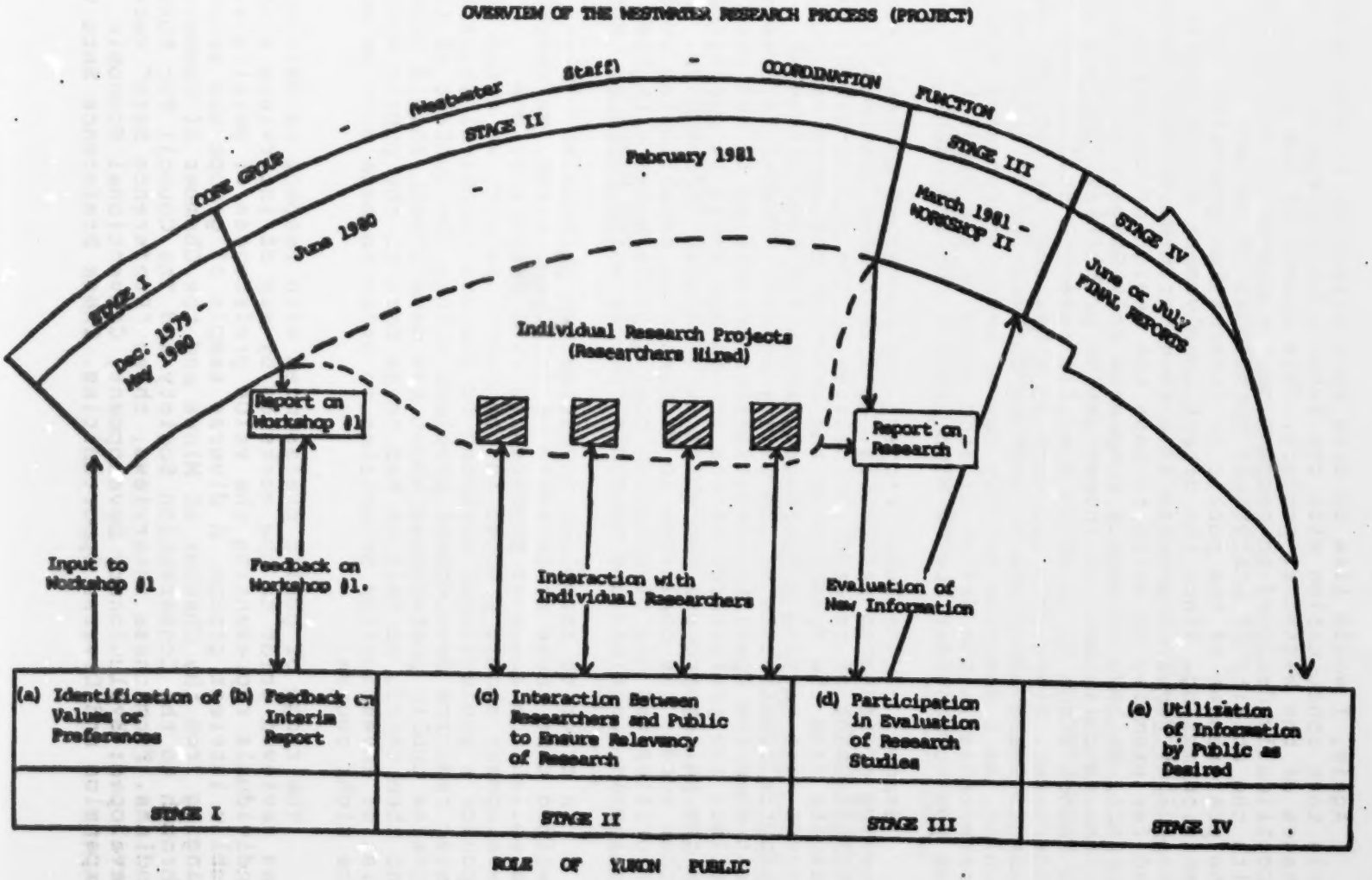

OVERVIEW OF THE WESTWATER RESEARCH PROCESS (PROJECT)
CORE GROUP - Nestwater Staff) - COORDINATION FUNCTION
STAGE I
Dec. 1979 - May 1980
STAGE II
June 1980
February 1981
STAGE III
March 1981 - WORKSHOP II
STAGE IV
June or July FINAL REPORTS
Individual Research Projects (Researchers Hired)
Report on Workshop #1
Report on Research
Input to Workshop #1
Feedback on Workshop #1.
Interaction with Individual Researchers
Evaluation of New Information
(a) Identification of Values or Preferences
(b) Feedback on Interim Report
(c) Interaction Between Researchers and Public to Ensure Relevancy of Research
(d) Participation in Evaluation of Research Studies
(e) Utilization of Information by Public as Desired
STAGE I
STAGE II
STAGE III
STAGE IV
ROLE OF YUKON PUBLIC

Figure 1

project are identified according to the dynamics of the overall research process (Stage II in Figure 1).

Again, I would like to draw your attention to the central role that consultation with the Yukon public plays in the various stages of the Westwater project. This aspect of the project is specifically designed to respond to the growing disenchantment with the ability of analytical techniques to reflect accurately the preferences of the public in information generated for decision-making. Since the direct involvement of the public in the policy research process is a somewhat new concept, Westwater had few examples on which to base the design of the Yukon Project. We have currently completed only Stage I of the project -- the establishment of investigation priorities, and are about to launch Stage II in which specific research studies will be undertaken. Since this approach is a new one, we consider we have much to learn about how to improve our methods of involving the public. As I describe briefly how we have incorporated public preferences in the design of each stage of the project, I would ask you to consider how we migh improve our approach.

Stage I of the Yukon Project was concerned entirely with the setting of research priorities. As I mentioned previously, the establishment of research priorities in the policy-making process results from the dynamics of the negotiations among various groups with varying preferences within the time and other resource constraints of the policy context. Therefore, Westwater felt that the specific investigation priorities it set should reflect the preferences of the groups who would be participating in the policy process for which it generated information. In other words, the challenge to Westwater in establishing research priorities was one of aligning public preferences with the realistic technical and economic choices which could be made.

In order to establish investigation priorities, it was decided that three steps would be followed. First, we needed to establish the range of preferences with respect to how development should proceed in the Yukon. Second, we opted to sponsor a professional workshop to discuss technical solutions to water resource development problems within the context of the diverse public preferences about how development should proceed. And then third, we felt we had to go back to the public with this list of investigation priorities in order to make sure we were on the right course.

The range of public preferences with respect to development was reviewed prior to the workshop by way of interviews with individuals representing the value preferences of particular public interest groups. A diverse sample of groups was selected, ranging from the Chamber of Mines and the Chamber of Commerce, through to the Conservation Society and The Council For Yukon Indians. From these interviews, three "Preference Sets" were developed: Evolutionary Development, Conventional Economic Expansion and Diverse Opportunities. These Preference Sets were

TABLE 1.

CONDUCT OF WORKSHOP: THE PREFERENCE SET APPROACH

Preference Set A: Evolutionary Development	Preference Set B: Conventional Economic Expansion	Preference Set C: Diverse Opportunities
1. Preservation of unique environmental & cultural resources	1. Reproduction of prosperous southern economy	1. Preservation of diverse lifestyle opportunities: minority interests include
2. Slow, evolutionary growth	2. Rapid growth	2. Slow to medium growth
3. Small scale development preferred	3. Large scale development preferred	3. Diverse scales of development preferred
4. Development for self-sufficiency	4. Development by resource extraction for export	4. Development by integrated planning for and by diverse Yukon public
5. Development based on renewable and human resources	5. Development based on natural resources in general	5. Development based on renewable, non-renewable & human resources
6. Economic growth controlled	6. Economic growth maximized	6. Economic growth managed
7. Protection of wilderness environments	7. Environmental damage minimized	7. Protection of wilderness environments

rationalized or realistic parameter sets, rather than extreme positions. Nevertheless, there could be distinctly different choices made under each Preference Set, reflecting the role that values play in the public policy process. Table 1 compares the essential features of these preference sets. Once the Preference Sets had been determined, a three day professional workshop was held to establish a preliminary list of investigation priorities. The 20 workshop participants were professionals employed either by government, universities, or consulting companies, and included the chairman of the intergovernmental Yukon Basin Preplanning Task Force. They were selected on the basis of their knowledge of various facets of water resources management in general and the Yukon water resources in particular. Westwater was conscious that government agencies were engaged in various research and planning endeavours, and we were careful to coordinate, not duplicate such efforts.

At the beginning of the workshop, the 20 participants were divided into four groups -- electric power, mining, fish and wildlife and recreation-tourism. Each working group was then assigned two tasks: first to identify a set of plan elements that would merit consideration in Yukon water planning for each of the three Preference Sets, and second to establish a set of investigation priorities. (A "plan element is a unit of a water management program, such as a hydroelectric project, a fisheries enhancement project, a water related tourist facility, etc.)

It is essential to understand that the participants were instructed not to be guided by their own preferences in identifying plan elements and in establishing investigation priorities. Instead they were asked to identify separately the plan elements that would govern the development of a water management plan. The same instruction applied to the identification of investigation priorities. In other words, three sets of potential plan elements and three sets of investigation priorities that accorded with the three Preference Sets were to be developed.

During the first day of the workshop each group worked by itself identifying the three sets of potential plan elements. On day two, coordinating sessions were scheduled between groups so that conflicts between plan elements for each sector could be discussed. For instance, the construction of a hydro dam on a specific river might conflict with the goal of maintaining the river in its natural state for a wilderness recreational corridor. These potential conflicts were recorded. Day three was a plenary session devoted to review of workshop results and the exploration of unresolved issues.

Although the purpose of the workshop was to establish investigation priorities, not to draw up water use plans for the Yukon, the process of thinking about potential plan elements highlighted those priority areas where further investigations are needed if water management decisions are to be sound. For

instance, the workshop process indicated that an assessment of the technical and economic feasibility of using electric power to operate pipeline compressor stations should be high priority. It was the judgement of workshop participants that large scale hydro facilities were unlikely to be necessary in the next 20 years in the Yukon unless the pipeline compressor stations were electrified. This fact was evident because the hard rock mining sector required only small blocks of power, and because the possibility of a high electricity consuming aluminum smelter being located in the Yukon was remote, given the competitive advantages enjoyed by other areas. It would therefore seem more strategic to concentrate power planning resources upon the investigation of small scale power alternatives if the electrification of pipeline is not technically or economically feasible.

Similarly, it became evident to participants in the workshop process that another high priority concern was an assessment of the legal, administrative and decision-making arrangements for managing water resources in the Yukon. All the groups, but the fish and wildlife and the recreation-tourism groups in particular, felt that the achievement of well coordinated management policies was dependent upon improved institutional arrangements.

For instance, the judicious management of the wildlife resources would require the regulation of both the animal populations and their habitat. Currently, jurisdiction for wildlife management is split between the territorial government which can regulate animal populations, and the federal government which owns and controls most of the land. In pursuing better planning practices, at the very least, agencies with these responsiblities should be working closely together to weigh the benefits of alternative management strategies, not just meeting to resolve specific management conflicts.

Similarly, the recreation-tourism group felt that the development of recreation-tourism policies depended on having some land use control. A river could never be set aside as a wilderness canoe route without such controls, and to plunge ahead with tourism promotion in the absence of such controls is risking the loss of all such irretrievable wilderness resources. In short, workshop participants felt that the full implications of any resource management policy could not be understood without an understanding of the institutional arrangements in the decision-making environment and their influence on the planning or policy process.

These two examples illustrate how the workshop process helped indicate those research studies which are most important to advancing the decision-making process in a rational way. The complete list of investigation priorities can be examined in The Report on the Workshop. Table 2 is a partial list of priority investigations for each of the four working groups.

TABLE 2.

SOME HIGH PRIORITY INVESTIGATION NEEDS; ELECTRIC POWER

1. Exploration of coal potential in Carmacks area.
2. Analysis of potentials for more efficient use of electric power.
3. Determination of feasibility of electrifying pipeline compressor stations.
4. Comparative technical-ecological-socio-economic assessment of Primrose, Hoole Canyon and Teslin hydro sites.
5. Comparative technical-ecological-socio-economic assessment of yukon, Taku and Taiya develoments, including potentials for utilization.
6. Further exploration of potentials for run of river and low head hydro for 1 to 5 MW loads.

SOME HIGH PRIORITY INVESTIGATION NEEDS; MINING AND MINERAL INDUSTRY

1. Compilation of resource data required by regulatory agencies at known mineralized areas and hydro sites.
2. Literature and field studies of ecological effects of mine site reclamation.
3. Estimation of benefits from coordinated development of adjacent mine sites.
4. Estimation of benefits and costs of alternative means of meeting mining infrastructure needs.
5. Analysis of alternative means of coordinating resource development.

TABLE 2. Contd.

SOME HIGH PRIORITY INVESTIGATION NEEDS; FISH AND WILDLIFE

1. Completion of improved resource inventories in priority development areas. 2. Development of improved information on key riparian wildlife habitats and key spawning and rearing areas for anadromous fish.
2. Development of improved understanding on response of species to disturbances.
3. Improving methods for socio-economic evaluation of resource use.
4. Advancing knowledge to improve management of northern lake fisheries for commercial purposes.

SOME HIGH PRIORITY INVESTIGATION NEEDS; RECREATION-TOURISM

1. Assessment of potential markets for Yukon tourist services. 2. Collection of data on water associated recreation use.
2. Determination of carrying-capacity levels for water based recreation areas.
3. Assessment of administrative and legal arrangements for implementing recreation-tourism policies.
4. Assessment of effects upon recreation of water storage for hydro purposes in Headwater Lakes of Yukon River.
5. Evaluation of historical, recreational, cultural aspects of Pelly River area.

The final step in this first stage of the project was the reporting on the output of the workshop to the interest groups in the Yukon in order to secure feedback and ensure we were accurately reflecting public preferences in the lists of investigation priorities. Meetings were held with the various groups, e.g. the Yukon Chamber of Mines, the Yukon Conservation Society, and the City Council of Whitehorse.

This first stage of the project required about three and one half months, and we are now engaged in Stage II -- the undertaking of specific investigation priorities. Our current budget will only permit us to undertake three component studies, but we are endeavouring to raise funds to expand our program. Westwater staff will be working closely with affected interests during this stage in order to keep such groups fully informed of our activities and to incorporate the views of these groups as investigations proceed. This second stage is scheduled for completion in February 1981.

Stage III of the project will involve the holding of a second workshop sometime in March, 1981, in order to reevaluate the water resource problems and issues in light of the new information generated in Stage II. We have not decided upon the exact format of the second workshop, but our current thought is to bring professional specialists and interest group representatives together in the workshop.

The preparation of the reports on the workshop and the specific research studies can be viewed as the fourth and final stage of the Westwater research project. It is fully expected that the output of this research project will pose as many new questions as it answers -- which is as it should be given the continuous nature of the public decision-making process.

However, Westwater is hopeful that two things are gained as a result of the completion of the Yukon Water Resources Project. First, we hope that the Yukon Project will improve both the decision-making process and the specific policy choices made in the Yukon as a result of both our research process, which is based on the incorporation of the range of public preferences in identifying investigation priorities, and as a result of the specific investigations undertaken. Second, by reporting on the problems and successes we encountered in conducting the experimental Yukon Project, we hope that we can advance methdologies and theory in policy analysis and research design which will benefit segments of the larger Canadian community.

You will note that the research process I have described, like the democratic decision-making process, involves an almost continuous flow of information among the research investigators, other professional specialists, the press, and various members of the public. Maintaining these channels of communication, as well as generating information which reflects the preferences of the public and the priorities of the decision-making parameters, is a

challenging task. We do not expect that our methods of meeting this task are beyond improvement. I look forward to hearing your ideas on this matter -- particularly with respect to how we might strengthen our procedures through a closer association with the library resources of the community.

Science and Research in Canada's North

Gertrude Rosenberg, Department of Indian and Northern Affairs

You'll have to bear with me. I'll do my best to replace Donat Savoie who, unfortunately, can't be here to talk to you about the Department of Indian and Northern Affairs' updated views on science and research in the Yukon and the Northwest Territories.

Guidelines for our policy on scientific research in the North were set out in the seminar held at Mont Gabriel, Quebec in 1972. Because northern conditions change so rapidly, in the late 1970's the Minister at the time, Hugh Faulkner, felt that a review of these guidelines should be made. He thought that the Department should try to establish a consensus to develop a policy and programme in the area of science and research which would culminate in a concrete plan to respond to the concerns of northerners and southerners for the organization and use of Northern research.

Keith Greenaway, former Science Advisor to D.I.A.N.D., undertook to produce a report on this subject, in consultation with seventy-five individuals of diverse backgrounds but with interest in northern science. I have a copy of the report here, called "A Framework for Scientific Activities in the Yukon and the Northwest Territories" and you are all welcome to consult it.

As a result of this report, a seminar was convened in April 1979 to explore the results of the consensus arrived at. The Chairman of this seminar was Dr. Tom Symons of Trent University; twenty-five people were present representing various groups.

Dr. Symons opened the meeting by speaking of the long-standing interest of Hugh Faulkner, the convenor, in the development of a concept for higher education in the North and its relationship to scientific research. The concept, of course, was not new. It had been talked about for approximately ten years. The Minister himself had reservations about whether or not a university type of structure was needed at this time, but certainly a plan was required to meet the needs of higher education, which should be sensitive to the needs of the northern people and include a great degree of resident participation.

The approach decided upon was to focus on the manner in which research activities might be gathered up and managed in a way best suited to serve northern needs and objectives. Past research activities were seen by northerners as having been fragmentary and not necessarily addressed to northerners' concerns. What appeared to be needed was an institutional framework which would reflect these concerns, and the discussion centered on the institutionalization of such a framework. It would require government support and it was from this standpoint that the study was undertaken.

Several criteria were taken into account in developing this concept: the need for a year-round scientific effort; the need to reflect a consensus of interested residents of both Territories; the use of Federal, Territorial and other scientific facilites, research programs, co-ordination and management arrangements; the need for a two-phase plan, the first to focus on the foregoing, the second on the gradual development of scientific facilities to include educational activities in collaboration with Territorial priorities; and lastly, the need for two separate structures because conditions differed greatly in the Yukon and the N.W.T.

Keith Greenaway's paper, "A Framework for Scientific Activities in the Yukon and the Northwest Territories" was discussed. He stressed the fact that throughout the Yukon and N.W.T. there exists a distrust of southern attitudes by northerners. Spokesmen for native organizations feel the Territories are being overrun by what can be called the southern science machines which appear to be getting larger each year.

Much of scientific activity in the North seems to them to be only to satisfy southern interests or is of benefit to individual scientists only. When the northern people get overwhelmed by the southern establishment they want more say in the direction of science activities. The management structure for such activities should not be controlled by the government or by southern universities alone. There should be a strong northern component.

Facilities to support research activities currently exist at Inuvik, Igloolik, Frobisher Bay and Rankin Inlet. Temporary facilities exist in Yellowknife. Plans call for a science resource centre for Whitehorse which will be adequate to accommodate the needs of the entire Yukon. The range of activities of the centre will hold four broad categories: 1. science support; 2. scientific programs; 3. scientific training; 4. scientific information.

The science support includes lab services, library and documentation services, computer service and linkage to information centres and data banks in other parts of the country; maintenance of field stations taking the support to scientific programs and advisory service on scientific aspects.

Scientific programs include activities relative to local interest initiated by the management committee which may be carried out through grants, contracts or visiting scholar program. Second, the programs should be initiated through a board of governors. The third part of the program is designed to meet change. That is to meet the needs of the centre for qualified personnel, to meet local and regional needs. This type of training will likely be ad hoc. Researchers using the centre will be required to teach or to lecture in the region while they are in residence. Funding is important. That would be by an annual administrative grant from the Federal Government to the Territorial Government. This will be earmarked for the

corporation, it will not be subject to revision by the Government.

One of the points discussed after Keith Greenaway's paper was so-called "freedom of science" and it was felt that there should be no attempt to control the pursuit of scientific investigation. Wherever possible the corporation should be supportive of these activities.

There was good technical discussion about the corporate structure itself. I'm not going to go into the details which you can read in the document I have here. The concluding remarks were important. The first was the need for the participation of native people, for the recognition of their views and support. The second was for increasing participation of native people in every aspect of research and environmental activity. The third was a clear statement of the processes which will ensure preservation of the freedom of science. Fourth, the possibility that the corporations may develop a tendency to be too directive should be ever present in the mind of management.

The conclusions of the seminar can be stated as follows:

1. The concept received general acceptance and recognized that the interpretation and implementation of the concept as set out in the concerns was basic to its success.

2. The concept should be fleshed out and moved upon as quickly as possible.

3. The Territorial Governments should examine and discuss the proposal and participate in further developments of the concept.

4. Further discussions and work should be undertaken to involve native organizations, universities, ACUNS, N.W.T. Science Advisory Board and other interested organizations for input into the implementation plan.

Garth Graham:

I'd like to make one or two brief comments about Yukon Governments' interest. The Yukon Government has expressed an interest in the concept and also it has expressed a great interest in a capital construction project for a research lab in Whitehorse, not just for the sake of capital construction project but also because we are examining post secondary educational facilities right now.

Kativik School Board

Julia Finn

Quebec is the only province in Canada at the moment with a native Inuit population.

The responsibility for the education of this population is in the hands of Kativik School Board.

With the signing of the James Bay Agreement in November of 1975, Kativik School Board was created and given control of education in the entire Quebec region north of the fifty-fifth parrallel. This in effect limited our enrolment to the Inuit population of the province.

Kativik incorporated two school systems already in place in the region. A federal school system had been established in northern Quebec in the early 1950's. It had maintained a policy of English as the only language of instruction for its students.

The second school system was provincial and was introduced into the region in the 1960's. With the creation of this second school system for northern Quebec, villages that had not had a single school fifteen years earlier suddenly had two schools to choose from.

The language policy of the provincial system was quite different from that of the federal. The mother tongue, Inuktitut, was the language of instruction in the first three years of schooling. Only in the fourth year was a second language introduced into the provincial classroom. The choice between English or French as a second language was left to the parents of each child in the provincial school system.

June 1978 saw the official transfer to Kativik School Board of the students, teachers and property of both the federal and provincial systems.

Our language policy is similar to that of the old provincial system. The parents committee in each community is responsible for deciding whether or not the mother tongue will be used in the early grades. In all but one community in our jurisdiction, Fort Chimo, Inuktitut is the language of instruction in the first two or three years. As in the provincial system, it is for the parents of each child to choose between English and French as the second language to be studied. Students continue to receive several hours of instruction in Inuktitut, however, even after the second language becomes the predominant one in the classroom.

The school year 1979-80 was only Kativik's second. We had a total enrolment this year of close to 1600 students and employed over 150 teachers, 60% of whom were Inuit. Considering our very small student enrolment, our budget for 1979-80 was impressive -

thirteen million dollars.

We operated schools in ten communities this year: George River, Fort Chimo, Leaf Bay, Payne Bay, Koartak, Wakeham Bay, Salluit, Akulivik, Inukjuak and Great Whale River. Some Inuktitut instruction was given by Kativik teachers in Aupaluk although the school did not open there this year. An Inuk teacher was also maintained by Kativik in Fort George to provide Inuktitut instruction to the small Inuit population in that predominantly Cree Indian community. Two northern Quebec communities, Povungnituk and Ivujivik, have however, continued to refuse the services of Kativik School Board. These two communities did not sign the James Bay Agreement and so do not recognize any body created by that document.

While our schools dot the Hudson and Ungava coasts, a lack of space in the north has forced us to maintain our administrative offices in Dorval, a suburb of Montreal. However, this is only a temporary situation, a move of the offices to the tiny community of Aupaluk has been approved and is scheduled for some time in 1985.

As can be imagined, considering the mandate of Kativik Sshool Board and the short time it has been in operation, we are faced with many serious difficulties. The great distances separating each school from the other and separating all schools from the administrative offices pose a great problem, a problem that we at Kativik all realize will be with us always. Our school district comprises, after all, one third of the province.

A serious lack of space is another difficulty in many of our communities. Many classes convene in some very unconventional places: private homes; abandoned army barracks; temporary classrooms set up in space rented in aircraft hangers. The expansion of our teaching staff is also affected by this space problem. The hiring of new teachers for many communities is often dependent, not on the qualifications of a candidate, but on whether or not a house or trailer can be found in a village for him or her. This space problem, however, unlike the problem of distances, at least has a solution. Kativik has embarked on a long term program of construction which will eventually touch all communities in our region.

In the classroom itself, our greatest problem is a lack of suitable teaching materials in all grades. As can well be imagined, very little teaching material exists in the Inuktitut language. For older students working in English or French, the difficulty is to find teaching materials that both meet the second language teaching situation and are also relevant culturally to the northern environment. Colleagues involved in education in Alaska, the Northwest Territories and Greenland have been very generous in sharing with Kativik Curriculum staff their own materials and ideas. Despite this pooling of resources, however, Kativik is still left with the task of creating many of

its own teaching materials in Inuktitut, English and French.

If Kativik School Board has some unique problems it also has some rather unique solutions. Our Inuit Teacher Training Program is one such case.

With the Inuktitut language as the only language of instruction in the first three years in most of our schools and with the hope that it will play a greater and greater role in the upper grades, our need for trained Inuit teachers is obvious. Kativik School Board is one of only two school boards in Quebec with a mandate to train its own teachers. The other board is the Cree School Board of Quebec, also created by the James Bay Agreement.

Kativik's Inuit Teacher Training Program excepts candidates without regard to scholarity. Students are registered at Montreal's McGill University and, on completion of the thirty credit program, are given a special McGill diploma in education and legal status as Quebec teachers. Courses are given, not in the south, but in the north twice a year. They are conducted by education specialists from the south and are given in the Inuktitut language with the help of Inuit translators and counsellors.

For those who wish to continue their studies, and several have, the diploma is considered the equivalent of the first year of a McGill Bachelor of Education Program. We at the board are all extremely proud of the Inuit Teacher Training Program and are excited by its results.

I would like finally to describe the library situation at Kativik School Board to you.

I joined the board just over a year ago. My base of operation is Montreal where I have been busy this year setting up a Resource Centre of professional literature and teaching materials for use by teachers in the north as well as curriculum development staff in the south. We have just recently formalized a project with the McGill Centre for Northern Studies that will see this Resource Centre's collection catalogued using the computerized system developed by the Centre for Northern Studies.

Besides the Resource Centre, I am also responsible for the development of the school libraries in the north. I spent eight weeks this year touring our schools, looking the school libraries over. They are in a sorry state.

With space at such a premium in the north, several of the school libraries are no more than windowless cubbyholes with book shelves or cupboards in classrooms. Few of the larger school libraries have room for students to actually sit down. Fortunately, I can say that proper library space is being incorporated into the design of all new Kativik schools about to

be constructed.

The library collections themselves are filled with materials so old and far removed from the northern situation that they interest few students. None of the collections is catalogued.

Only one school library had library staffing this year. In the community of Salluit we were fortunate to have a professional librarian, the wife of one of our teachers, who was able to give some time on a part-time basis from February to May to the school library.

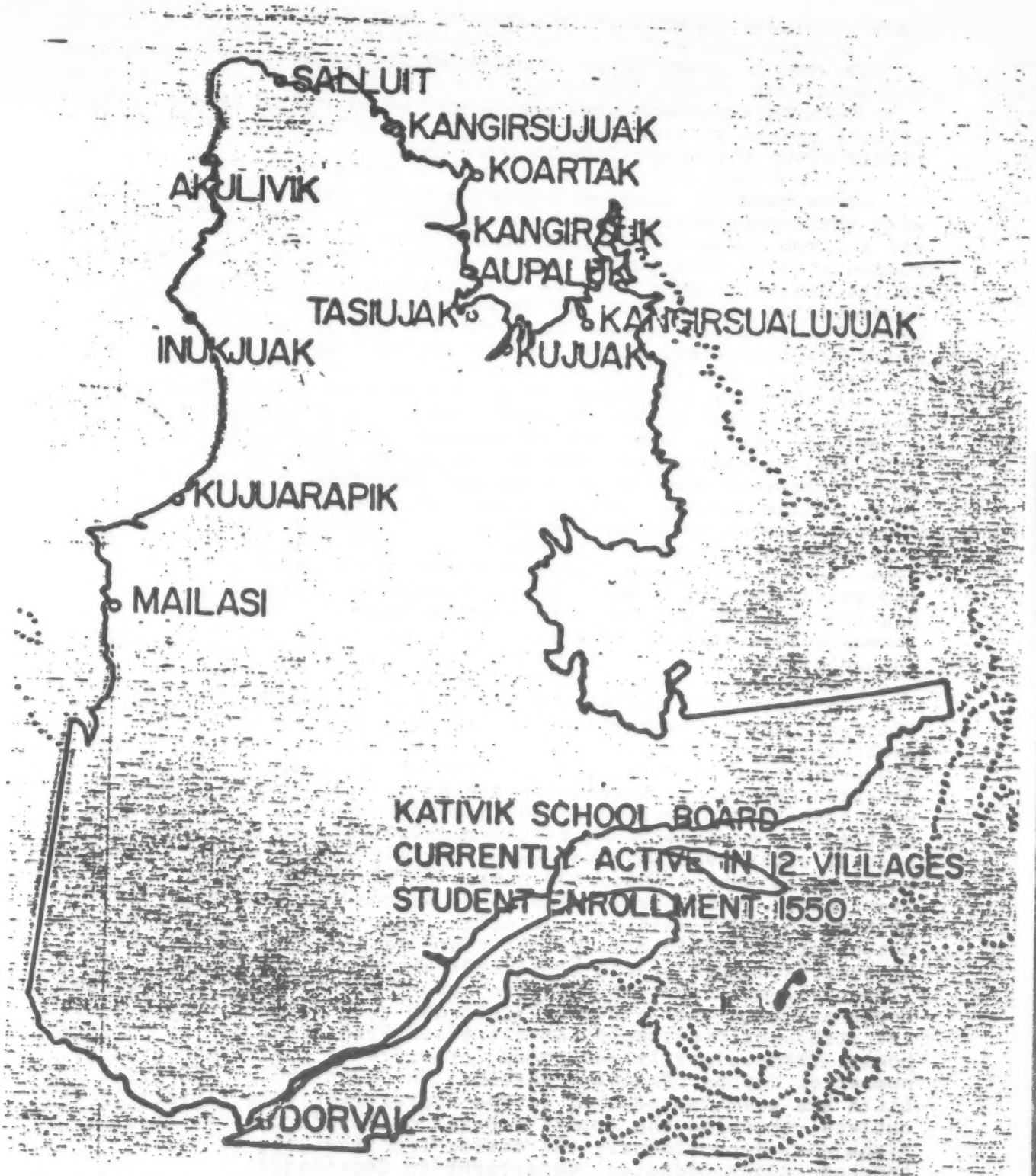
This picture of doom and gloom is, however, slowly being turned around.

The Resource Centre in Montreal is now being established as the acquisitions and cataloguing centre for the school libraries.

As for library staffing, we have asked the Quebec Ministry of Education to allow us in the 1980-81 school year to hire on a halftime basis four library assistants to work in our larger schools. Such assistants are to be hired from Inuit population in each community. It is only with the help of personnel located permanently in each village that the school library situation can improve. The lack of library experience among these assistants will, of course, pose a problem. However, we feel a series of courses given in the north in library techniques set up along the lines of our Inuit Teacher Training Program may be the answer.

Kativik Regional Government has recently approached us to negotiate the possibility of our cooperating in the development of community libraries in northern Quebec. Such a project, with funding from various Quebec ministries, would see our school libraries become combined school/community libraries and would see Kativik school Board and Kativik Regional Government share the costs of staffing, staff training, collection development, building construction or renovation and maintenance. The cooperative project is still in the process of negotiation, but we are confident we will soon begin to see results.

These are exciting, fast moving times in arctic Quebec as they are all across the north. I feel privileged to have been given a front row seat to the spectacle and to have the opportunity to make a very small contribution of my own.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Public Libraries in Greenland

Benny Høyer, Nunatta Atuagaateqarfia

This talk concentrates on one or two subjects in the public library system in Greenland. First, I would like to tell you a little about the conditions we work under.

Greenland is, geographically, a large island and we have a very small population spread on the coast in 16 major communities and a large number of smaller communities. In each of the major communities we have public libraries as well as school libraries. In the smaller communities we have depository libraries. With the establishing of Home Rule in Greenland the library system was among the first to become "home ruled", and in January 1980 the third era of the Greenland library system started.

In the very beginning the libraries were private collections serving only the Danish officials and traders in Greenland. Only a few Greenlanders knew how to read Danish, and of these only a very small number had access to the books in the private collections. In the 1850's books and magazines in Greenlandic were distributed through out Greenland, and during the next decade a number of small libraries were started. The libraries were usually connected with the church or the school in the small communities, and the purchase of books was usually privately funded. However, a number of books in Greenlandic were distributed free of charge to the churches and the schools - these books were published either by the church or by the local authorities.

In the 1950's the second era of the Greenland libraries started. One of the things that happened was the effort to centralize and modernize the library system. In 1956 a trained librarian started working. From then on the library system started to develop towards the system we know today. Libraries were established in all communities, and most of the smaller settlements were serviced by the main library in Godthaab. The biggest effort was put into supplying all libraries with reading material in Greenlandic. The number of titles available in Greenlandic is not very large, and, as the books usually are printed in small editions, we often find that a popular book is out of print within a couple of years after being published. However, a number of the books that are available at the libraries, are the ones that are out of print, and although the books are read over and over again and thus quickly worn out, we are still able to supply the libraries with fresh copies of these books. This is partly due to our practice of purchasing a large number of copies of books published in Greenlandic, and after the title has been distributed to the approximately 75 library outlets, stocking the excess copies for future use. We have, right now, approximately 400 titles from the past 30 years stocked in our technical department in Copenhagen.

All this could be done because of the centralized structure of the library system in Greenland. All the funding from the Danish Government was given to the central library in Godthaab to purchase books in Greenlandic and Danish and supply the libraries in the rest of Greenland with suitable selections of literature in Greenlandic and Danish.

With the establishing of Home Rule this has been partly changed. We still have the centralized purchase of Greenlandic books in Godthaab as well as the ability to stock titles for future use. These titles are, of course, available to the libraries who need fresh copies of the titles.

What has changed is the rest of the system. Now, each community has its own budget based on the number of people living in the community. With this money they have to pay staff and pay for the books, magazines and newspaper subscriptions they have beside the selection of books in Greenlandic. In some communities this is good, because it enables them to control their acquisitions better and it keeps their purchases closer to the needs of the community than what was possible during the centralized system. Some communities, however, who have eight or nine small settlements will spend a very large percentage of their money on the staff and only very little money on the actual purchase of books. You might say, that it is a good thing that the Greenlandic books have been kept out of this decentralization. The way the purchase of the Greenlandic books is organized, with a special and separate funding, we are able to supply each community with sufficient copies of each of the new titles published, regardless of the amount of money the communities have on their own budget. The output of literature in Greenlandic relevant to libraries is so limited that we, for the time being, have no problem in financing the purchase of books for distribution.

The Greenlandic material I have mentioned so far is mainly recreational reading. Only a small amount of non-fiction and debate literature is published yearly in Greenlandic. Most government and official material in Greenlandic as well as in Danish is distributed to schools and libraries in Greenland, free of charge.

Our main problem the next couple of years concerns library staff. With the centralized system it was fairly easy to find qualified personel, as the work in the libraries was almost exclusively concerned with the opening hours of the library. But with the decentralized system the librarians working in each community have been given the full responsibility of running the public library themselves. The librarians in the bigger communities are usually recruited among the teachers. In the small settlements sometimes the teachers are librarians or sometimes it's a fisherman or a housewife. It differs from place to place, but generally the person working as a librarian has had no previous experience with library work whatsoever. Some of the

people working as librarians now have been working as such for a number of years - others have worked as librarians for a short period only. As the change of personel is very big we must face the problem of everchanging staff in the communities.

Still, we hope and trust that we will be able to, from the central library in Godthaab,'' train and support the librarians in the local communities and we also hope that it will be possible to maintain the library system on an equal level in all communities, despite the obvious differences in financing staff and purchase of books in the individual libraries.

'' which is the only library in Greenland with professionally trained librarians

The Yukon Indian Resource Centre

Lois Raycroft

The Yukon Indian Resource Centre was started in the early 1970's by the Yukon Native Brotherhood. For several years, the "library" consisted of a bookcase with a small collection of books. In 1974, the "library" was turned over to the Yukon Indian Cultural Education Society and became the Yukon Indian Resource Centre. The purpose of the changeover was to keep the Resource Centre a non-political unit. It was now a necessity to have training for the staff. The Resource Centre was very fortunate because Mr. Garth Graham, Deputy Minister of Library and Information Resources, implemented a training program using the staff and facilities under his direction. Mr. Graham and his staff deserve a vote of thanks for their patience, time and effort put forth in such a program. On completion of the training, each girl worked for a short time in the Resource Centre and then left to go into other fields. We like to think that their library training and experience opened up new options for each of them. For example, one will be returning to the Yukon, a year from now, a fully qualified teacher. Another compiled a booklet that we printed, called "A Tahltan legend". The third one, finally became Co-ordinator of the Yukon Indian Cultural Education Society, President of the Indian Women's Association and the driving force behind the opening of the Women's Transition Home in Whitehorse. She is now training with Indian Affairs as a band facilitator. Also, the Resource Centre is fortunate to have on permanent loan a number of books from the Yukon Regional Library.

The next step was to seriously consider the direction that the Resource Centre would follow. For North Americans, the library has been a traditional source of information for 200 years. The white man's library formed an integral part of his heritage of literate education, but it is a part of our culture, not the Indian's. Native people have always had an oral tradition. All knowlege and wisdom was passed on by the spoken word. People were the "libraries" of Native culture, the storehouse of knowledge. If Native people are to be encouraged to make use of the Resource Centre, then oral communication must be established. This is especially true in the communities. We've decided on the areas of concern and they are:

1. the Indian child in school
2. the Indian youth no longer in school
3. the adult Indians
4. the teachers of Indian children.

With the problem areas in mind the Centre started a collection of curriculum materials developed by Indian education centres in Alaska, B.C. and various other regions of Canada and the U.S.

Next, we had to make the teachers aware of the materials available and to encourage the use of these materials in the classroom. Response, at first, was non-existent, until we literally pulled the first teacher in off the street. Now I realize this is not recommended library procedure, but it proved to be a turning point for our Centre and we are now invited to teachers' staff meetings, to bring materials and hold discussions. We also have a display at the teachers' orientation and all Yukon teachers conferences. Our displays are always shared with Y.N.B. Curriculum Development. Although we belong to different organizations, our work is closely intertwined. In fact, when you come to the Resource Centre tomorrow there will be a display of the Curriculum Development materials and you'll meet some of the people there. The teachers now use our materials in the classroom, and during the school term many classes visit the Resource Centre. We have come a long way.

Progress in dealing with the problems of adult Indian education and student drop-out has been painfully slow, but signs of change are slowly taking place. Several weeks ago, all 12 bands requested money to build book shelves. Some of these bands don't have books, but it's a step forward. All bands will be encouraging their people to enter the adult basic education program commencing this fall. Among others, the Resource Centre expects to be an active participant in the program. All of the bands have been requesting the Centre to order books for them, and we hope this interest will continue to grow. One band orders books to put on indefinite loan in the school library and we would like to encourage other bands to do this. We feel as literacy increases in the communities the need for the Resource Centre, the Yukon Regional Library System will be of paramount importance.

Library service to Native people is not an isolated issue. When speaking of library service you neither circumvent the issues of education, information, and communication nor avoid the implications of social and economic conditions. Library service to and in native communities must be assessed and organized in response to the needs and uniqueness of the region, the community and the people. In the yukon, we have twelve communities with different cultural backgrounds, and five different languages. Progress in the communities to-date has been very slow by non-native standards, but we are not alone in this problem. Cultural education, curriculum development and many other organizations are trying to cope with this problem and they are directing their skills to developing programs that will develop a pride in ancestry, and a value system compatible with the Canadian way of life. To maintain the central strengths of their cultural heritage, language, history, crafts and customs and

truly Native skills and values.

Guidance is still of critical importance to encourage the teacher to use the Resource Centre, along with the contribution of learning resource and library facilities, and drawing from the strengths of the community elders. Other crucial factors necessary are matters of curriculum development, quality of teachers, and the involvement of parents in the education process. The Cultural Education Society has been very responsible for getting Native language into the schools. They now realize that this alone is not enough. They intend to work in the communities to encourage the elders, the people who still maintain their language, to work with the children to help bring back this language. Not necessarily to make it a first language, but so that they will always have it as part of their culture. Whitehorse now has a teacher training program and from the beginning our Centre was recognized as a source of materials to be used by the trainees. A wide variety of courses at the university level are now given at the teacher training centre. This meant it has been necessary to upgrade our materials to accommodate these students. This has been an exhilarating experience for us to suddenly go from Grade I books to university level books and we will certainly continue to enlarge and upgrade our materials. But if in our quest for recognition, we leave behind the Indian student, the Indian adult, many of whom are learning to cope with these little black squiggles on paper for the first time, and we no longer have time for the elders when they visit the Centre, then any success we have had or may have in the future will be meaningless.

The Inuit Taprisat of Canada Information Services

Debbie Brisebois, Ottawa

First, I will begin by explaining what I.T.C. is and how it evolved.

A founding conference was held in Ottawa in August 1971. Shortly afterwards, Tagak Curley became the Inuit Tapirisat of Canada's first full-time worker. Curley, who had worked for the Northern Affairs Department in Northern Manitoba in the field of adult education and at Repulse Bay as area administrator, left government service to work for the Indian-Eskimo Association and then became the prime mover of the organization. He organized and chaired the founding conference, became its first president and for three years directed the affairs of the fledgling association. Inuit Tapirisat's first headquarters were in Edmonton, but, in 1972, the offices were moved to Ottawa when it became obvious that I.T.C. needed better access to the Federal Government. Since then regional associations, representing Inuit in six areas of N.W.T., Northern Quebec, and Labrador have been formed. The Committee for Original Peoples' Entitlement (COPE) was I.T.C.'s first affiliate. Other affiliated organizations are the Makivik Corporation, the Labrador Inuit Association, the Baffin Region Inuit Association, Kitikmeot Inuit Association, and Keewatin Inuit Association. The regional Inuit associations look after day to day problems and concerns in their communities and regions. Their presidents also sit on the I.T.C. Board of Directors. The national organization concentrates on national issues but helps out with community or regional problems when requested to do so. For example, I.T.C. head office frequently goes to bat for Arctic communities when local residents believe the environment and wildlife are threatened by resource developments. In short, Inuit Tapirisat is dedicated to preserving the culture, identities and way of life of the Inuit and to help them find their roles in a changing society.

Now, I'll just tell you a bit about information services. We have two information officers at I.T.C. They publish a monthly newsletter, ITC NEWS, and they've just begun to publish another newsletter, Inukshuk News. There's another newsletter which is the Land Claims Monthly.

To strengthen our participation in the Northern Inuit broadcasting network of local stations, we are in the process of joining each local broadcasting unit in the Inuit communities to distribute our weekly radio program. As more communities require facilities to broadcast in their communities we will expand our distribution. We raised funds for radio equipment through the Canadian Donner Foundation and Secretary of State. Primarily, our program deals with I.T.C. activities on a national level with a wide range of subjects such as land claims, health issues, participation at the C.R.T.C. hearings, Canada's involvement in the upcoming Inuit circumpolar conference, I.T.C.'s Board of

Director's meetings, etc. We also carry some news from Greenland. One of the advantages of providing our own production facilities will be the training opportunities available to Inuit interested in developing skills in all aspects of radio broadcasting. It will also allow us to expand our program coverage and develop new programs. Right now we have plans to expand our program to one-half hour in each language from the present format of fifteen minutes. This additional time will be used for current affairs and teaching material such as legends, etc. We have three full time staff working on the program including a host, co-host and production advisor. It is our intention to build a better communications network with more input from the I.T.C. regional offices across the north. We also intend to begin production of an Inuit information series aimed at Southern Canada with the intent of informing more Canadians of the contemporary issues affecting inuit.

Now, for the library. There's not much of a library at I.T.C. There are a lot of materials but they are packed in boxes, shoved under shelves etc. I'm attempting to sort it all out but the problem has been the funding and I've only been doing it one day a week so I'm not getting very far. I'm trying to convince people that it is a much needed service, especially with land claims negotiations about to resume at the end of July. There's a lot of material at I.T.C., but it is not organized and no one can find it. People usually end up running to the National Library and wasting time when what they're looking for is actually right there.

N.W.T. Library Services Update

Pat Smith, Chief, N.W.T. Library Services

Since the last report in Alaska in 1976, there are three more member libraries in the system, making a total of 22 giving direct service to 77% of the population. At present, this is the limit of our capability to handle. There are also several small (50) book deposits which come and go as usual, depending on community interest. 21,000 more volumes are housed in member libraries across the north, for a total of 78,000. Circulation, with incomplete figures, has been around 120,000 for each of the last two years and membership is between 25 and 30% of the total population and 43% of the population with direct access to a library.

Slowly, A V materials are being brought into the collection. Each member library has a stereo-cassette deck and accessories, bought from our David Kootook Memorial Fund. Tape and book kits are circulated as part of a reading stimulation program and these are used a great deal by children of all ethnic origins, both in the libraries and at home. Several of the libraries now have board games and some youngsters, and adults, use the library only to drop in and play a game of checkers, chess, whatever.

The latest achievement has been the appointment of a professional librarian for the Yellowknife Public Library. We were very happy to see Jeannette Fish get the position for which we had lobbied for a couple of years. The position comes under the City of Yellowknife Administration and is funded on a shared basis by the city and the Government of the NWT. It is great that there is someone at last who can devote the time to Yellowknife's special needs.

The main drawbacks have been the inability to get funding for computerization, (though we do have some administrative support), and the freezing of the Children's Librarian's position, due to shortage of funds. Although we have been without the latter for two years nearly, it does not seem to have affected the children's circulation. The local librarians are obviously doing stalwart work. The holdup in the former, computerization, is having serious repercussions in that the larger communities now have collections of between 9,000 and 11,000 volumes and are finding that they need full catalogues. With the help from various sources of funding, summer students are being hired to produce title and subject cards from the author shelf list card provided with each volume. The duplication of work, the filing, and the housing of the catalogues are expenditures of time as well as money, which we had hoped to forestall when we first started pushing computerization nine years ago. We are now in correspondence with a couple of private sources of funding who are showing interest in the project, but we are a long way from firm backing yet awhile. The major current problem is the severe financial restraint situation. We don't

know if this will ease in the next fiscal year, but the NWT administration has been badly hit by the increase in oil prices. We found ourselves with a 7-10% decrease in dollar total in our allotment, which had to accommodate all increases in salaries, permanent and casual, as well as other higher costs for materials etc. The cuts have not yet been felt by the libraries, but when periodicals stop arriving and new books are cut right down, I'm sure we shall be hearing from them.

To return to more cheerful matters, two major changes were effected in the Government In-Service Library before it left our wing. Last year, much more spacious quarters were found on the ground floor of the Laing Building and a Clerk 2 position was added to the establishment. We had lobbied for both for several years and, at long last, managed to get the library to the point at which it should have started off in the early seventies. Last November, the division as a whole was transferred from the Dept. of Natural and Cultural Affairs (now Renewable Resouces) to the Dept. of Justice and Public Services. Museum services were transferred to the same department. It was the intention that the justice part of the department should become a separate department and that we would be with public services, which seemed fairly appropriate. However, that split has now been delayed, so we'll probably go for a while trying to explain how library services became involved with the Judiciary. One change which did take place a few months after the move was, that in order to streamline the administration, the In-Service Library was moved out from under our wing to another division. We had recommended this change to the Task Force looking at the Government of the NWT structure, last summer, but thought it had been completely overlooked until implemented on April first. Since the In-Service Library is now handling its own orders etc., this has taken quite a load off the shoulders of the staff in Hay River.

Finally, there is a real stirring of interest in library services and recognition that they exist. The Legislative Assembly has asked that NWT standards be prepared. We have based capital grants, size of collections, hours of opening etc. on the quantitative standards put out by the library services branch of the Provincial Government of British Columbia in 1968 and 1973. There has never been sufficient funding to come up to them though. Now we shall be looking at the 1978 B. C. standards and the 1979 Saskatchewan ones. While the revision of our current standards will be worked out with a NWT Library Advisory Board, the most conservative estimate is that it will cost over one and a half million dollars to bring our library services up to a modification of the other two sets of standards tailored to the NWT. This does not include capital expenditure.

I'm optimistic enough to think that with the recommendations of an Advisory Board and the support of the member Library Boards and staff and with a strong voice from the public, we might get a large part of that funding, even if it is spread out over ten

years or more.

I'll finish on that note of wishful thinking.

The Yellowknife Public Library

Jeannette Fish, Yellowknife Public Library

Yellowknife, capital of the Northwest Territories, is a city of 10,000 people, located on the north shore of Great Slave Lake. It is at the end of the dusty, unpaved Mackenzie Highway, some 1,600 kilometres north of Edmonton, or one and a half hours via Boeing 737.

Government - federal, territorial, and municipal, is the largest employer, followed by the gold mines and local service industries. Four elementary schools, two junior high schools and one senior high school provide the educational needs; no vocational training school, college or higher education facilities exist.

Since October 1979, a full-time professional librarian has been employed by the city to administer the library. Prior to that, the Northwest Territories Public Library Services, with headquarters in Hay River on the southern shore of Great Slave Lake, employed part-time clerical staff. Now, an annual grant is provided to the city to assist in providing library services.

The library building, originally built to temporarily house the museum, is old and lacks meeting, display or auditorium facilities. In spite of this, I have been involved in programming with the National Children's Book Week in November, and National Book Festival Week in May. For the latter, Minnie Freeman, Inuit author of Life Among the Qalunaat and Ernie Lyall, Spence Bay author of An Arctic Man and Yukon artist/author Ted Harrison travelled to a number of communities across the territories and were well-received.

Yellowknife's book collection has about 10,500 titles, many of which are outdated and in need of weeding. There is no catalogue - author/title or subject - of the non-fiction collection. An author catalogue of the Northern Collection and fiction is available. The lack of a catalogue, of both Yellowknie's collection and that of the Northwest Territories Public Library Services, is frustrating to library users and staff.

The library, open only 30 hours per week, is well-used by its 7,000 registered borrowers. Last year, a circulation of 42,000 items was recorded. A small Northern Reference Collection, which includes both current and out-of-print titles, is well-used locally and by those who have come from afar to do research.

Our isolation from larger and more adequate information centres, and lack of participation in computer (or even telex) networking systems, has resulted in a close working relationship between all libraries in Yellowknife - we need each other! Regular meetings of school, public, government and special

library staff are held to share knowledge and information about each others' resources.

Both city and territorial governments are being actively lobbied by a community pressure group for not only extended library hours and a book budget - both top priority, but also to increase awareness of the importance of the information, education and recreational library needs of the community.

In closing, I would say that all aspects of the Yellowknife Public Library have been neglected in the past by both administrators and politicians. The needs of the community will, I hope, make itself felt to both politicians and administrators, and result in funding to provide the level of library service required.

The N.W.T. Government In-Service Library

Jo Anne Allison, Yellowknife

I would like to give you an introduction to the Northwest Territories political system, to demonstrate how the N.W.T. differs from Yukon. This would put the library situation into its proper perspective. Unfortunately I do not posses the expertise to give this introduction and must confine myself to the specifics of libraries.

I am the Government In-Service Librarian. Other libraries in Yellowknife are located at the Department of Indian Affairs and Northern Development, the Department of National Defense, the Dene Nation office, the N.W.T. Department of Justice and Public Services, the N.W.T. Department of Health, the N.W.T. Department of Finance, and the elementary and secondary schools. There is also a public library. We all depend on each other for guidance and help. The closest libraries other than public libraries, are located in Edmonton. At present, few of these facilities are staffed with professional librarians or library technicians.

There is no co-ordinator of library services for the Government of the N.W.T. and no Department of Library and Information Resources like Yukon has. It falls to the Government In-Service Librarian to help organize, train, provide expertise, order books, catalogue and provide reference service for most departmental libraries.

The Government In-Service Library has as its mandate, to provide reference information, inter-library loan and circulation services to all G.N.W.T. departments, as well as the general public.

At present we have approximately 20,000 catalogued titles. Our cataloguing backlog exceeds 20,000 titles. Since we are a full depository library for Canadian as well as N.W.T. government documents, we are continually accumulating more paper.

The acquisitions budget has for the past year, been directed exclusively to the purchase of reference materials. With our busy reference service the maintainance of this collection is essential. One can imagine my chagrin to learn that my budget, which also covers supplies, and journal subscriptions as well as book acquisitions, was cut from $25,000 to $7,000. This amount would not cover periodical subscriptions for one year.

I have been in the library since 1978 and I am still educating administration as to the importance of library services. They neither understand nor appreciate the value of information, nor the manpower required to organize information resources.

On the opposite side are the library users who are desperate for information. The library's three staff members are constantly demanding that extra bit of effort from themselves without any moral, financial or administrative support from superiors. It is especially frustrating to realize that we shall have to continue plodding along, trying to justify our existence with each reference phone call received.

Alaska Library Development

Dick Engen, State Librarian for Alaska

As always, the Northern Libraries Colloquy turns out to be better than one can anticipate. Maybe, it is because of the incredible weather - perhaps arranged by someone selling their soul! In truth it is the opportunity to get together; to discuss our common problems and difficulties; to share our anticipations and the opportunities we have to: (1) directly serve the people of the North and (2) serve the needs of researchers throughout the world with information on the North.

In Alaska library development there is one pre-eminent word and that word is COOPERATION. Thirteen years ago we developed a long range plan called Library Services for All Alaskans. It was based on a concept of building on existing strengths to meet the library needs of Alaskans. No matter who needed the information or where it was located, we endeavored to establish a network to see that the material and the user could get together. We are fortunate that the major libraries in Alaska are generous with their collections in serving a patron's need, wherever in the State the person is located. I don't know the degree of multi-type library cooperation in Canada but in the U.S., our level of cooperation between academic, public, schools, special, government and the State Library, is head and shoulders above what many other states have managed to accomplish.

We do have some strong resources, of course. These include the E.E. Rasmuson Library at the University of Alaska, Fairbanks and the University of Alaska, Anchorage Library. None of the state's libraries are funded at an adequate level, but we are making an appreciable dent on the shortages and meeting more of the needs. The library long range plan was written in broad terms. We wanted an overall guide. Specifics may change from year to year, but the goal - library services for Alaskans - stays the same. The 1969 plan is still the one we're following. It established three regions for the entire State. The Northern region was based on Fairbanks; the Southcentral region, based on Anchorage; and the Southeast based on Juneau. In each of these regions two types of libraries were identified. These were a Resource Library to back-up local library services and a Research Library to provide for in-depth research. The Resource Libraries are the public libraries in Fairbanks (Northern), Anchorage (Southcentral), and Juneau (Southeast). Research Libraries are the University of Alaska Libraries in Fairbanks and Anchorage and the State Library in Juneau. This is an example of building on strength and not creating a new institution. All types of libraries are joined in a cooperative network to provide the best possible service to all people who need it. Fairbanks has built a new major northern resource library building. Anchorage will shortly put up a multi-million central headquarters building.

After the Regional Research and Resource Libraries we have the local community library. This institution, when you really get down to it, is the strength of the library system for an entire State. It is the point of first contact into the library system. The term Alaska Library Network was first used several years ago when we needed a heading for a list of 3,000 cassettes that were jointly purchased by a number of libraries for use statewide. It has remained as a good descriptive term.

In about 1975, the State Library and the Rasmuson Library at UAF took the first steps into bibliographic computer activities. We joined with the evolving Washington Library Network, and produced a 5,800 title published book catalog of the Skinner (Asaskana) Collection of the UAF library.

Two years ago the State Library and Rasmuson went online with W.L.N. and last year the University of Alaska Anchorage, Anchorage Municipal Libraries, and Fairbanks North Star Borough Library came online and by September we will have the State Law Library online. Hopefully within the next 6-8 months we will add one of the military base libraries. They plan to use a public access terminal as an experiment in a public area. We will have, the first of July, our first comfiche catalogue of Alaskan holdings in WLN, approximately 60,000 titles. It is truly a network tool, for that little packet of 50 fiche will go out to every library in the State of Alaska. That does two things; it gives full subject, author and title access to the most recent material purchased by Alaska's major libraries; and they know its location and call number.

The State Government, a year ago, passed a law that established a Data Access Center by expanding the responsibilities of our State Publication Distribution Center, which now serves 20 depositories in Alaska, Canada and the Lower 48. The Data Access Center would computerize information resources already extant about the State of Alaska but underutilized because they are unknown outside the creating agency. Funding for the Center is still pending.

Thank you for the privilege of sharing with you our common concern about the North.

Business Meeting of the 8th Northern Libraries Colloquy

G. Graham: There has been a request for a complete list of the conference participants with addresses. I think that that would be in the proceedings.

N. Cooke: Yes, we will put it at the back of the proceedings, but if anybody wants it earlier we've got most of it online right now. I will check with Garth for additional attendees here in Whitehorse. Most of the names are on the list in your kit.

G. Graham: Okay, I can give you the additional ones.

N. Cooke: We can distribute a list by the end of June. Is it assumed that everybody would like to have a list? (Meeting agrees would like list mailed a.s.a.p.)

M. Andrews: How about the proceedings for the last two Colloquies?

G. Graham: Nita has made some efforts to see what she could find out about the proceedings from Paris. But which person from Alaska would like to report on it.

M. Falk: Unfortunately the quality of the tapes was such that they were not easily transcribable. I suspect if one wanted to, one could put out an abridged version, but the party who has done the most work on them is no long on the staff and there are no present plans to publish. We do still have the tapes.

G. Graham: I believe that Paul McCarthy has been acting as the archivist for the Colloquies and general documents are supposed to wind up in his care. Is that basically where we would go for these too?

M. Falk: Yes.

N. Cooke: About the 7th Colloquy: when I sent out the notice I got a letter from Sylvie Devers who said that she hoped to be able to attend, that she was working very hard on the proceedings and she hoped to have them with her. We sent out registration forms, but I have had nothing more from her.

G. Graham: In other words there is every evidence that those proceedings are still in the works.

N. Cooke: I think that they will come eventually. The usual time lag for the proceedings from any colloquy at the Centre has usually been about three to four years.

G. Graham: We are going to talk about the colloquy newsletter and Nita would like to report on the sales of the Polar

Libraries directory, also we will have a brief discussion on the bibliography of Northern Canada. Harry King suggested an article on northern databases to appear in some journal, and we will conclude the meeting with the question of where next. So the next item will be the newsletter and Dick Engen, having a paternal relationship with the newsletter, can tell us briefly what it i and where it is.

D. Engen: Alaska State Library has provided a newsletter editor who has done the job since we first started putting it out. Phyllis was going to be here this time but found out she couldn't make it after all, but she indicated that she was willing to continue to be editor and the State Library would be happy to continue to fund the preparation and mailing out. It does not amount to a major amount and the State Library feels that it is a good medium of communication. Also, there seems to me to be an advantage to having a common place to keep sending information. If you have any suggestions please give them to me now. The newsletter should reflect the concerns and interests of what the people of northern libraries, which is a beautifully unorganized group, want.

G. Graham: I think it proper to convey a note of thanks to Phyllis to tell her that we value her services immensely. Nita, can you report on the Polar Libraries Directory?

N. Cooke: As you know, five or six years ago, we published a directory under the editorship of Nora Corley-Murchison. The Boreal Institute has distributed this on behalf of the Colloquy and during the past year we have had about $100 in interest on the savings account, which now stands at $979.19. The account is still standing waiting to know what we want to do with it.

H. King: What is the current selling price?

N. Cooke: $5.00. A directory update is something I think the Colloquy itself should decide what we are going to do. Maybe each country could gather its material and then somebody coordinate it.

C. Innes-Taylor: I would take responsibility for giving information for Alaska Libraries and Archives if it can be sent somewhere.

G. Graham: I'm not certain that we can accomplish getting twenty representatives at this meeting because I don't think twenty countries are represented.

N. Cooke: Boreal Institute will undertake to send the questionaire sheets to the contact person in each country and say this is the listings for your country, would you please update it and send it back. We don't need to

re-design the format extensively. We would also be prepared to enter the data into the computer using SPIRES programs.

G. Graham: I think that is a start. It's going to be a long term project and we will be asking for progress reports the next time we meet.

N. Cooke: We have the newsletter as a means of communication.

D. Engen: Why don't we put an article in the newsletter stating that we are going to be updating this directory.

G. Graham: Can we do something reasonable with $979.19? Maybe fiche would be a better option than a printed publication.

N. Cooke: We could put it out on three ring binder paper. The cost of the directory should be increased to keep up with inflation. We need addresses.

G. Graham: Harry had requested that we consider a library journal article on northern databases. As I hear Geza's ideas explained here, what I was hearing something like in addition to a study on northern databases and a publication on the results which was the clear identification of certain problems or certain needs that are not being met, and a request that some agency within U.S., in terms of the paper that Geza delivered in Edmonton, some agency take central responsibility for dealing with these problems. So, in fact, instead of talking about an article here on northern databases we are actually talking about a U.S. counterpart, a bibliography on northern Canada which is the next item on the agenda.

D. Engen: Are we ignoring the idea of the journal article as a first step to give credibility and awareness of northern libraries?

G. Graham: I hope not.

D. Engen: That should be done first, but not limit us.

G. Graham: Would it be fair at this stage, in terms of practicality for us to suggest that the N.L.C. support Martha and Carol in attempting to get funds to do that sort of thing as the best way to have some positive action? (Meeting concurs)

G. Thuronyi: My idea was to try to get the information as it exists.

G. Graham: My own assumption was that such a research project, and publication of that research project, by identifying what was there would also comment about what was not. Then we could come to some conclusions about what the real

problems are, beginning with what was not there.

The next item is the bibliography of Northern Canada and I would just briefly like to report again on that topic and request some support from the Colloquy. Participants in the Bibliography on Northern Canada proposal just met on the lawn and decided that we would, as a group, communicate with the Association of Canadian Universities for Northern Studies to indicate that we really want to come together to finalize the proposal, and to see some action. We will be going ahead with that. But we think it would be useful for the N.L.C. to communicate with the Association of Canadian Universities for Northern Studies. This will go out over my signature and Nita's signature to indicate that this was discussed here. And so I'm basically requesting your support here.

D. Engen: You've got very strong support as far as I'm involved. Your letter should be very strongly worded of the type of support so that if this group doesn't become very strongly in support of it then there has to be the question of how viable is it, or is it just a pro forma and I don't think it is. I think it is very active support that we are giving. (Meeting indicates general support)

G. Graham: The next question is where do we go next.

M. Falk: I think that it would be possible to pursue the matter of meeting in Europe and try to drum up the kind of support that we would need. I suggest that we make an attempt to meet in Scandinavia, perhaps Norway, and if that fails for whatever reasons, then we fall back on Great Britain. But in any case I think it would be a major mistake not to try to meet and include as many Europeans as possible.

N. Cooke: I agree, I think we must preserve this alternation of venue. Is it possible to host a colloquy in Greenland?

B. Høyer: It's not possible for us to host a colloquy in Greenland in two years time; maybe in four years time.

G. Graham: Good, we have a tentative location for 1984.

M. Andrews: I would just like to third Harry's suggestion and I think that the most obvious thing to do is to do what we did before in Finland.

B. Sokolov: I don't know if this has been tried before, but to me it might be a different approach, if we are in Europe we might also try a visit to some Soviet Arctic libraries. We could just write and say we would like to come.

G. Graham: For the benefit of those of you who haven't had a long history of this organization, this is of course, a natural

question and in fact, there have been numerous attempts to see what could be done.

B. Sokolov: I'm not talking about them coming to us, I'm talking about us coming to them, not as an official group.

G. Graham: What we've got now is some attempts to see whether the Scandinavian Library Association is something we can parallel by Harry getting in contact with them. The first alternate then is Scott Polar Research Institute in Cambridge and the second alternate is maybe some tentative suggestions that there are a couple of institutions in U.S.

N. Cooke: I don't trust my memory but I remember a lady saying that Iceland would like sometime to host the Colloquy. I don't remember her name.

D. Engen: Is it all right if I report part of this in the newsletter. (Meeting concurs.)

G. Graham: Another thing I would like all of you here to keep in mind is that if you are deciding here to visit someone in Europe who does not know us and does not know what the Northern Libraries Colloquy is, quite a few of us are going to have to put the program together and take it there. I can assure you that the burden that falls upon the host in terms of running this, the continuity of the existence of N.L.C., is substantial. We are asking a lot of someone. We don't know yet who that is, there may be problems with the program.

(There was an general discussion regarding additional focuses for this group, reference service, situations besides the online that have predominated of this meeting)

G. Graham: I would like to thank you all for coming to Whitehorse. I've enjoyed last week and this week immensely. We've had the chance to meet some people who are in the same field and also the chance to renew some old friendships, some of which have lasted a decade. There is a group of people that have had a long and continuing tradition with N.L.C. When we were trying to put this thing together we sort of wonder does it really meet any needs or serve any needs; I think it does. This week has reaffirmed my faith in the need for such an organization and I think Geza, who delivered a paper in Edmonton on some of the practicalities of international bibliography, pointed out that there isn't any strong central organization and that it is impractical to consider that N.L.C. could ever become such a thing. So the basic function that it serves is simply a chance to get together and that that is a sufficient need for an organization. With that slight observation I say goodbye.

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8th Northern Libraries Colloquy

Edmonton, June 1 - 3, 1980

Whitehorse, June 4 - 6, 1980

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